



Business Plan 2023 - 2028

SA-02a Supplementary Annex Our commitments – Justification analysis

December 2021

SA-02a Our commitments – Justification analysis

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1. Introduction

- 1.1.** The next regulatory price control review period, known as RIIO-ED2 is a five year period and is the second for electricity distribution to be determined using Ofgem's Revenue = Incentives, Innovation and Outputs framework. This price control period runs from 1st April 2023 to 31st March 2028.
- 1.2.** Western Power Distribution (WPD) is required to submit a 200 page Business Plan document, supplementary Annexes, detailed cost tables, financial information and a range of other documents which form our submission under RIIO-ED2 to Ofgem, which will be used to determine allowed revenues for the price control period.
- 1.3.** Our RIIO-ED2 Business Plan has been produced and compiled in line with the following key principles:
- Co-created with our stakeholders and supported by them.
 - Our Plan – 'prepared with our stakeholders for delivery by us'.
 - Aligned with WPD's purpose and values.
 - Affordable for all of our customers.
 - Sustainable and will enable net zero before 2050.
- 1.4.** Everything in our Business Plan submission is driven to achieve the following four strategic outcomes 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.

- 1.5. The diagram below (figure SA-02a.0) shows the structure of the full Business Plan submission with the red box showing where this document fits into the overall suite of documents.

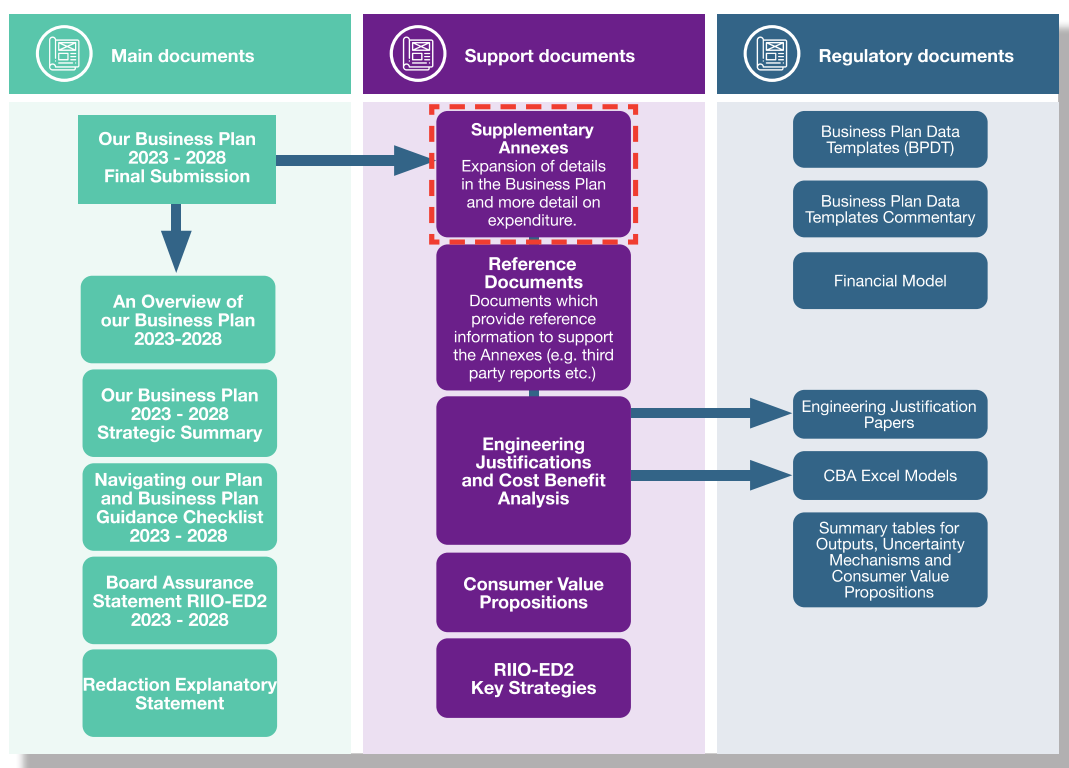


Figure SA-02a.0 Business Plan submission

- 1.6. This document is a Supplementary Annex to Chapter 2 of WPD's RIIO-ED2 Business Plan document. Annex 2: Our Commitments provides more details on our 42 core commitments and more than 400 wider commitments. This document (Supplementary Annex SA-02a: Our Commitments – Justification Analysis) builds on this further by demonstrating how each core commitment was developed and demonstrates the well justified nature of each by detailing the considerations undertaken against six stringent justification criteria.
- 1.7. We appreciate that the readers of the WPD RIIO-ED2 Business Plan suite of documents will range from regulatory experts and well informed stakeholders through to new customers who may have little previous knowledge of WPD.
- 1.8. This document is aimed at readers who require a more detailed understanding of the commitments that will be delivered.

1.9. This document is subdivided into the following sections:

Section	Title	Content
2	Achieving a ‘well justified’ Business Plan	A summary of how we produced a well justified Business Plan.
3	Justification assessment criteria	The section provides details for the criteria used to assess the justifications.
4	Justification analysis - How we arrived at the targets and options presented to stakeholders	This section provides analysis to support the targets we set and options presented to your stakeholders.
5	Detailed justification papers	This section provides further details our justification papers.
6	Wider justification papers	This section provides further details on our wider justification papers.

2. Achieving a ‘well justified’ Business Plan

- 2.1. WPD has followed an extensive process of co-creation with stakeholders in order to build our Business Plan commitments ‘bottom-up’, starting from a blank sheet of paper. This process is set out in considerable detail in Supplementary Annex SA-05 – Giving customers a stronger voice: Enhanced engagement, including tracking each core commitment from its origins as a high level theme/topic of stakeholder priority, through to its refinement into a specific, measurable and stretching final commitment. In the majority of instances, stakeholder feedback was the originating source for each commitment, although in some cases regulatory or legislative requirements, coupled with WPD’s own knowledge and expertise running the electricity network, led us to make some unprompted proposals to for stakeholders to consider. However, in all cases, a final commitment has only been agreed following extensive consultation with stakeholders, negotiating and refining the final levels of ambition we have committed to for RIIO-ED2.
- 2.2. As part of this process, where stakeholders requested high level outputs and actions to be achieved in certain areas, in some cases WPD presented a range of performance target options for consideration. This Supplementary Annex SA-02a outlines the origins and rationale for the scope and scale of these options offered to stakeholders, including the consideration of “left-field”, innovative and non-traditional actions, and whether these gained stakeholder support. This demonstrates that WPD’s Business Plan commitments do not simply deliver “more of the same” but have sought to deliver high ambition and innovative new approaches wherever possible.
- 2.3. It should be noted that the structure and design of WPD’s stakeholder workshops, often using roundtable discussions with a broad cross-section of stakeholders representing diverse perspectives, was purposeful in order to deliver live triangulation of feedback during the event itself, ensuring that consensus was achieved wherever possible. As such, while some extreme or uncommon suggestions may have been made by stakeholders (e.g. outsource and relocate all of WPD’s Contact Centres overseas in order to significantly reduce operating costs, but potentially accept some worsening in service levels as a consequence), such examples will have been considered and in some instances rejected at source by the wider stakeholders in attendance. Our focus throughout our engagement processes is to build a plan that has the broadest and strongest support possible across our customer base.
- 2.4. Nonetheless, this has not curtailed the consideration of options for delivery in RIIO-ED2 that are appropriately ambitious and challenging to the way things have been done historically. For example, WPD’s co-creation events as part of the ‘Stage Three: Business Plan Development’ resulted in a long list of over 1,000 suggested actions and initiatives.
- 2.5. Our engagement process has therefore revealed a huge range of actions and new innovations/improvements which stakeholders would like us to deliver. Our 42 core commitments are the headline overarching outcomes which we will deliver for customers. Beneath these there are a host of wider commitments that have been co-created with stakeholders and which are built into the plan. These are key enablers to achieve each core commitment.

- 2.6.** This paper sets out the extensive justification considerations for 18 of the total 42 core commitments. These are the commitments with significant material impact, where stakeholders were presented with a range of options in terms of commitment scope and performance targets as part of the Business Plan development and refinement stages. Some core commitments were of a more binary do or do not do nature, where stakeholder support was overwhelming in driving us to take action. A number of these do not materially affect the cost allowances set for WPD. A full explanation of how commitments were selected for this detailed justification is outlined in chapter 2 of this document.
- 2.7.** Supplementary Annex SA-05: Giving customers a stronger voice – Enhanced Engagement is an essential document to be read in conjunction with this Annex, as it sets out the customer and stakeholder insights that have driven the creation of our Plan and helped to for a set of core commitments that closely address their needs and preferences. This Annex 2a then seeks to take a broader view of the criteria that must be met in order for WPD’s Business Plan to be considered well justified. These include whether the plan is sufficiently ambitious/innovative and whether it ultimately will deliver significant value for customers. As part of this it seeks to evidence that stakeholders and customers have had sufficient information on which to express their preferences and sets out the decision-making that led to the options presented for stakeholders to consider as part of the development of WPD’s Business Plan.

3. Justification assessment criteria

- 3.1. Our objective throughout the development process for WPD's RIIO-ED2 Business Plan was to arrive at a set of proposals that are well justified and highly acceptable to our customers.
- 3.2. Stakeholder support and endorsement of our proposals is one key component of this justification; however, there are additional factors we must consider and thresholds that must be met in order for WPD's Business Plan to be considered fully 'well justified'. In agreement with the Customer Engagement Group, we have identified six key justification criteria as follows. WPD must:
- Explain why **actions are appropriate for a Distribution Network Operator (DNO)** to undertake (WPD best placed to deliver) and that electricity distribution customers should fund.
 - Demonstrate that we have **considered alternative approaches** to meet these objectives and explain why the proposed approach is best.
 - Demonstrate that the costs are efficient and that the **benefits of the actions plausibly outweigh the costs** (recognising benefits may not all be quantifiable and may be uncertain).
 - Test whether a representative sample of **customers, as well as stakeholders, support the Business Plan** when properly informed of the costs and benefits.
 - Propose how the initiatives included will be treated in the price control so that **customers are not exposed to unacceptable risks** (e.g. paying and not getting the benefits).
 - Provide any **assurance undertaken** or commissioned by WPD and explain how this has been taken into account.
- 3.3. WPD's commitments have been built over the last 18 months, and therefore justification has developed from several different sources. The three initial versions of our Business Plan provided several opportunities to identify areas of weak justification. With the full history of WPD's analysis and engagement on each, the overview below acts as a summary of evidence collected over the full business planning process.
- 3.4. For the Business Plan as a whole to be considered well justified, these six criteria must be met across all of WPD's core commitments, as well as key projects and areas of discretionary spend, as set out in our Engineering Justification Papers (EJPs). The EJPs are separate documents and include an explanation of the various options considered for each major investment and the justifications for selecting the final approach proposed in WPD's final Plan. This Annex does not therefore duplicate these justifications and focuses exclusively on the rationale behind WPD's core commitments.

4. Justification analysis - How we arrived at the targets and options presented to stakeholders

How commitments were selected for detailed justification

- 4.1. The six justification criteria have been considered as part of the creation of all 42 core commitments in WPD's Business Plan, and all significant areas of discretionary spend.
- 4.2. Justifications can therefore be found in a number of areas including: EJPs (for all discretionary spend greater than £1 million), Consumer Value Propositions (commitments that will generate significant extra value for customers) and key strategies (e.g. Distribution System Operator (DSO) strategy and Whole Systems Strategy).
- 4.3. This Supplementary Annex SA-02a focuses on the justifications specifically in relation to WPD's 42 core commitments. While the six justification criteria have been considered against all, we have set this out in three levels of detail:
- i. **Detailed justifications:** Detailed explanatory narrative of WPD's considerations against all six criteria, including outlining every option considered prior to stakeholder consultation and the reasons why certain options were offered and others were rejected prior to stakeholder engagement.
 - ii. **Wider justifications:** Detailed explanatory narrative of WPD's considerations against all six criteria, with an explanation of the options that were co-created with stakeholders.
 - iii. **Stakeholder justifications:** How the commitments were co-created and refined with stakeholders, starting from a blank sheet of paper.
- 4.4. We have selected 12 core commitments for the most detailed justification level. These were selected for the following criteria:
- **Significant financial materiality:** The expenditure for each commitment has a material impact on customer bills (Expenditure >£2m per year; >£5m over 5 years).
 - **Significant strategic materiality:** These commitments are fundamental to delivery against key strategic priorities for RIIO-ED2 identified by either stakeholders, Ofgem or the Customer Engagement Group; for example, those relating to the achievement of net zero.
 - **Where a range of options were presented to stakeholders:** Commitments where stakeholders were able to significantly shape the type of action taken and the scope of ambition. This does not include commitments that originated from stakeholder co-creation events and were of a binary do or do not do nature, as these have overwhelming stakeholder support to justify their inclusion in the Business Plan.
 - **Overarching, umbrella commitments:** Commitments that are key flagship deliverables for customers, that are culmination of other actions in the Plan and not contributory to others (and therefore captured by those justifications). E.g. overall customer satisfaction is an overarching commitment, whereas a commitment in relation to the speed of our telephony response is contributory to this.
- 4.5. Carrying out this in-depth analysis on these twelve has enabled stakeholders, including the Customer Engagement Group and Ofgem, to understand the robustness of our consideration process as a whole, which gives confidence that this has been the case across all commitments, including those of

lesser materiality. A further six commitments have been selected for a wider justification. The remaining 24 commitments are justified via extensive stakeholder engagement and are set out in Supplementary Annex SA-05, chapter 5.

Justification approach for all 42 core commitments

4.6. The consideration of WPD's 42 core commitments and the level of justification outlined in this Supplementary Annex, is set out below:

Core commitment (Key: = selected for detailed or wider justification in this annex)		Considerations:				Level of justification:				
		Financial materiality	Strategic materiality	Range of options considered	Overarching, umbrella commitment	Annex 2a: Detailed justification	Annex 2a: Wider justification	Annex 5: Stakeholder justification	EJP	CVP
1	Drive the achievement of net zero across our regions sooner than 2050 in line with stakeholder plans (some areas as early as 2028), by ensuring network capacity is available.	✓	✓	✓	✓	✓				✓
2	Ensure customers are able to connect low carbon technologies quickly and easily, with the network being ready to connect at least an additional 1.5 million electric vehicles and 600,000 heat pumps by 2028.	✓	✓	✓	✓	✓				
3	Make it easy for customers to adopt low carbon technologies and achieve net zero in their region much sooner than 2050, by driving the delivery of ambitious local area energy plans and proactively engaging all 130 local authorities each year via 90 local energy surgeries.		✓	✓	Leads to #1		✓			✓
4	Deliver a network to meet the evolving needs of our customers by aligning our future energy forecasts with the plans of local regions and the Electricity System Operator (ESO), by updating WPD's Distribution Future Energy Scenarios every 12 months.		(Leads to #2)	✓	Leads to #2			✓		
5	Keep bills as low as possible and minimise the requirement for load related reinforcement by adopting a 'flexibility first' approach in order to maximise the utilisation of the existing network.		(Leads to #2)		Leads to #2			✓		
6	Unlock capacity from the existing grid and therefore avoid the need for reinforcement, by stimulating the development of flexibility markets and implementing simple, fair and transparent rules for procuring flexibility services, with a six monthly tender and exceptional customer satisfaction for flexibility services.		(Leads to #1&2)		Leads to #1&2			✓		
7	Deliver solutions that achieve the greatest social benefit to customers by utilising a whole system approach for major reinforcement to improve network efficiency. We will undertake three regional collaboration trial schemes by 2025 involving gas, electricity, water, waste, transport and heating sectors.		(Leads to #1&2)	✓	Leads to #1&2			✓		
8	Actively support the expansion of green, renewable energy generation and help local communities to decarbonise and lower their bills, by connecting at least 30 community energy groups to the network each year. We will hold 60 community energy surgeries per year and providing a dedicated WPD community energy representative to assist with connection and flexibility offers.		✓	✓	✓		✓			✓
9	Support a growth in community energy schemes by facilitating their access to available funding streams.		(Leads to #8)		Leads to #8			✓		
10	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.	✓	✓	✓	✓	✓				
11	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.	✓	✓	✓	Leads to #10	✓			✓	
12	Significantly reduce our impact on climate change by delivering a 20% reduction in SF ₆ losses and drive industry partners to develop technological alternatives to reduce overall volumes of SF ₆ on the system.	✓	✓	✓	Leads to #10		✓		✓	
13	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.	✓	✓	✓	Leads to #10		✓			
14	Improve visual amenity by removing at least 50km of overhead lines in Areas of Outstanding Natural Beauty and National Parks.	✓	✓	✓	✓	✓			✓	
15	Achieve a 10% net gain in biodiversity (in line with nationally recognised assessment tools) for new major projects and for selected primary and grid substation sites.			✓	Leads to #10			✓		
16	Keep bills for customers low by delivering an additional stretch efficiency saving of £95m through RIIO-ED2 (on top of £723m of efficiencies already included in the plan) by utilising innovation to improve our processes and show a positive carbon impact.		✓		✓		✓			
17	Enhance access to data that is tailored to the individual needs of our customers, by making 60% of WPD's network data available via an interactive Application Programming Interface.			✓	✓			✓		
18	Ensure customers are not left behind in the smart energy transition by offering at least 600,000 Priority Services Register customers a bespoke smart energy action plan each year.	✓	✓	✓	✓	✓				✓
19	Support at least 113,000 fuel poor customers to save £60 million on their energy bills over RIIO-ED2.	✓	✓	✓	✓	✓				

20	Expand the reach of our Priority Services Register to at least 75% of total eligible customers and 80% of customers with critical medical dependencies to ensure those in greatest need receive targeted support services. This will include registering at least 50,000 additional hard-to-reach customers each year.		✓	✓	Leads to #22		✓			
21	Achieve a 'one-stop-shop' service so that customers only have to join the Priority Services Register once to be registered automatically with their energy supplier, water company, gas distributor and telecommunications companies.				Leads to #22			✓		
22	Maintain high quality data to allow us to deliver bespoke support to customers in vulnerable situations by proactively contacting over two million Priority Service Register customers once every two years to remind them of our services and update their records (with 60% via direct telephone call).	✓	Ofgem baseline	✓	✓			✓		
23	Support and add significant value to our local communities via a 'Community Matters' social initiative associated with the smart energy transition, vulnerability, environment and sustainability. This will include a shareholder-funded annual £1 million community support fund and 1,000 volunteer days per year for WPD staff to support local causes.			✓	Leads to #24			✓		✓
24	Deliver enduring, long term support to our communities by publishing an updated WPD Social Contract and performance report every year and maintain our prime Environmental, Social and Governance (ESG) rating.		✓		✓			✓		
25	Build decarbonised communities and local energy schemes by providing £540,000 shareholder-funded support per year to install solar PV on schools in areas of high economic deprivation.	✓			Leads to #24			✓		✓
26	Deliver exceptional service levels by achieving an overall average customer satisfaction of 93% or higher by the end of RIIO-ED2, with separate reporting for emerging technology customers.	✓	✓	✓	✓	✓				
27	Ensure a speedy telephone response to customers by answering calls within an average of four seconds and maintain an abandoned call rate of less than 1%, within our UK-based, in-region Contact Centres.				Leads to #26			✓		
28	Ensure a speedy social media response to customers by replying to enquiries within an average of five minutes and Webchats in an average of less than a minute, 24 hours a day.			✓	Leads to #26			✓		
29	Provide greater insight on our planned work activities and interruptions on our network by creating an online viewer.				Leads to #26			✓		
30	When things go wrong ensure we put things right very quickly, by resolving at least 90% of complaints within one day and 99% of complaints within 25 days.				Leads to #26			✓		
31	Make it as easy as possible for customers to apply to connect individual domestic low carbon technologies by providing a same day connections response via an online self-assessment tool				Leads to #2)	Leads to #2		✓		
32	Provide quicker and cheaper connections options for customers by increasing the number of flexible connection offers made, ensuring 100% of schemes receive a flexible alternative to reinforcement where the reinforcement cost is >£75k for LV, 11kV and 33kV connections and >£100k for 66kV or 132kV connections and/or where works will take more than 12 or 18 months respectively to complete.				Leads to #1&2)	Leads to #1&2		✓		
33	Deliver improved network reliability where on average power cuts are better than one interruption every two years lasting less than 22 minutes (12% reduction in customer interruptions (frequency) and 16% reduction in customer minutes lost (duration)), utilising vulnerable customer data to prioritise network improvement schemes.	✓	✓	✓	✓	✓	✓			
34	Improve the service for at least 8,260 Worst Served Customers by undertaking 70 schemes.	✓	✓	✓	Leads to #33				✓	
35	Counteract deterioration of network assets through an investment of £216 million per annum, delivering a 22% change in risk to keep network risk at similar levels to the start of the price control period.	✓	✓	✓	Leads to #33	✓			✓	
36	Reduce the flooding risk at key sites by undertaking 102 flood defence schemes and engage stakeholders to reduce the need for new assets in flood risk areas.	✓	Leads to #33	✓	Leads to #33			✓	✓	
37	Increase the safety of around 200,000 children by delivering 780 schemes to underground, insulate or divert overhead lines that cross school playing areas.	✓	✓	✓	✓	✓			✓	
38	Keep our children safe by sending electrical safety education packs to every primary school in WPD's region and educate at least 80,000 children per year via direct learning.			✓	Leads to #39			✓		
39	Reduce the risk of data loss or network interruption from a cyber-attack by continually assessing emerging threats in order to enhance our cyber security systems.	✓	✓		✓			✓	✓	
40	Reduce the risk of disruption to our operations and enhance the resilience of our IT network security as we deliver greater digitalisation, by increasing levels of threat monitoring, prevention and alerting systems, and upgrading our disaster recovery capability to ensure continuity of operations.	✓	Leads to #40		Leads to #40			✓	✓	
41	Demonstrate exceptional and embedded employment practices by achieving Gold accreditation with Investors in People by the end of RIIO-ED2.				✓			✓		
42	Achieve year-on-year improvements to the levels of diversity within the business and publish an annually updated Diversity, Equity and Inclusion Action Plan				Leads to #41			✓		

5. Detailed justification papers:

CATEGORY 1: DELIVERING AN ENVIRONMENTALLY SUSTAINABLE NETWORK

Commitment 1: Net zero across our regions

Drive the achievement of net zero across our regions sooner than 2050 in line with stakeholder plans (some areas as early as 2028), by ensuring network capacity is available.	
Justification criteria:	WPD action:
Desired outcome - agreed with stakeholders (see Annex 5)	Ensure net zero is achieved across WPD's regions as quickly as possible, and dramatically sooner than 2050. Key to this is ensuring customers can easily connect low carbon technologies without delays due to a lack of available network capacity, ensuring our regions lead the way to net zero such that WPD connects more than the national average connecting in the UK.
1. Actions are appropriate for a distribution network operator (DNO)	<p>RIIO-ED2 Business Plan guidance sets out the baseline expectations in regards to a DSO transition. The Business Plan must clarify the DNO's long term overall targets/objectives for the network's environmental impacts, beyond the RIIO-ED2 period. As a DNO, WPD will play a unique role in the decarbonisation of the energy system, by enabling the decentralisation of energy resources. WPD interacts and coordinates with a high number of local authorities (LAs) for the maintenance and development of our network and to enable the decarbonisation of the local and regional economies. In its letter to networks from 8th August 2019, Ofgem mentions that networks shall identify where their baseline investment plan may impede the efficient achievement of any of the pathways to achieve net zero. Networks will need to propose how their Business Plans can flex to address impediments and facilitate timely investments which support potential pathways. In addition, Ofgem's Decarbonisation Action Plan (2020) states that network companies shall undertake comprehensive assessments and put appropriate plans to deliver resilience to climate change.</p> <p>Net zero is a national target, but it will be delivered regionally. In the region served by WPD, nearly 80% of the local authorities have declared climate emergencies, setting targets well in advance of 2050. It will take a collaborative approach between WPD and a wide range of stakeholders to achieve a decentralised energy system to deliver these ambitious targets. WPD's expertise is unique for the delivery of this commitment and we are well placed to deliver it to our customers. This is due to our expertise in electrical engineering and in the connection and installation of low carbon technologies (LCTs).</p> <p>In RIIO-ED1 WPD is already taking a leading role by engaging local stakeholders extensively to understand their priorities and bake these into our Business Plan commitments. We have engaged every local authority in our region on our plans for RIIO-ED2, while providing key forecast information, as well as trusted advice and support to co-create their bespoke local energy plans, and ensuring they align with and inform WPD's Distribution Future Energy Scenarios (DFES). In project EPIC, WPD is developing a standardised process that can be used with different local authorities to support the creation of integrated local energy plans, and in a format that can be incorporate back in the DFES analysis.</p>

	<p>During the consultation of the RIIO-ED2 framework, some stakeholders wanted RIIO-ED2 to see closer engagement between network operators and LAs. There were several mentions of the need to align network planning with the delivery of local energy strategies. As a DNO, WPD is critical to this task, and is well placed to bring the requisite parties together in the planning effort.</p> <p>When engaging LAs, we also seek feedback on the DFES projections, our proposed investment and LCT forecasts. As a result, we processed over 10,000 LA new development records as part of our DFES for 2020/21, achieving unprecedented granularity and accuracy in our forecasts - all of which helped shaped the accuracy of our planning for RIIO-ED2.</p>																						
2. Considered alternative approaches (and options presented were sufficiently ambitious)	<p><u>Why did we offer these options / evidence of appropriate ambition:</u></p> <table> <tr> <th>Options considered:</th><th>Achieves outcome?</th><th>Technically feasible?</th><th>Cost effective?</th><th>Stakeholder support?</th><th>Cost</th><th>Benefit</th><th>Considerations and final decision:</th></tr> <tr> <td>A. <i>Passive and reactive only: Wait for demand in LA regions to arise and provide connections in line with our timescales to provide capacity</i></td><td>✗</td><td>✓</td><td>✓</td><td>✗</td><td>Zero</td><td>Lower bills as c.£200m Totex increase wouldn't be delivered. However, we would be deferring this investment to later price control review periods and leaving a huge amount of 'catch up' in order to achieve net zero by 2050.</td><td>Rejected: Stakeholders expect WPD to show leadership in relation to net zero and to ensure the network is ready so that we actually drive up the ambitions of local regions and bring forward their net zero target dates wherever possible. This option therefore runs entirely contrary to that feedback. Failing to take action in RIIO-ED2 would risk WPD becoming a barrier to new connections, including electric vehicles and heat pumps, due to lack of available network capacity. By doing so this risk having a very detrimental impact on customer satisfaction and not delivering against key aspects of Ofgem's Business Plan guidance. A lack of immediate action will reduce the likelihood of net zero being achieved in the UK, and if WPD demonstrates a lack of urgency this would be contrary to all government policy (e.g. the Welsh Government's recent 'Net Zero Wales' plan).</td></tr> </table>							Options considered:	Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?	Cost	Benefit	Considerations and final decision:	A. <i>Passive and reactive only: Wait for demand in LA regions to arise and provide connections in line with our timescales to provide capacity</i>	✗	✓	✓	✗	Zero	Lower bills as c.£200m Totex increase wouldn't be delivered. However, we would be deferring this investment to later price control review periods and leaving a huge amount of 'catch up' in order to achieve net zero by 2050.	Rejected: Stakeholders expect WPD to show leadership in relation to net zero and to ensure the network is ready so that we actually drive up the ambitions of local regions and bring forward their net zero target dates wherever possible. This option therefore runs entirely contrary to that feedback. Failing to take action in RIIO-ED2 would risk WPD becoming a barrier to new connections, including electric vehicles and heat pumps, due to lack of available network capacity. By doing so this risk having a very detrimental impact on customer satisfaction and not delivering against key aspects of Ofgem's Business Plan guidance. A lack of immediate action will reduce the likelihood of net zero being achieved in the UK, and if WPD demonstrates a lack of urgency this would be contrary to all government policy (e.g. the Welsh Government's recent 'Net Zero Wales' plan).
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	B.	Minimum: Deliver enough investment to deliver against a 'base case' (minimum) view of future network requirements and volumes of anticipated LCTs	✓	✓	✓	✓	£622m	Ensure sufficient available capacity to meet the minimum likely projections for LCTs. Unlikely to drive ambitions of some regions higher by having capacity ready and available which would enable them to go further and quicker in the transition to net zero.	<p>Offered: WPD's baseline plan includes upfront investment to deliver the capacity required under high certainty, but the actual investment required will be driven by national and local government policy, combined with activity in the consumer market. These factors are likely to change during the price control, so load related expenditure must be agile, in both directions, to respond to these changes.</p> <p>There will be more certainty of the investment in some areas that are supported by historical growth, national targets and local area enablers. Using the DFES, WPD has identified the volumes and locations of constraints triggering in each scenario and the consequential low regret investment required to accommodate the forecast growth. Through stakeholder engagement, forecasting and scenario modelling, WPD's Best View has been created. It identifies the most credible and likely growth which needs investment from WPD to deliver.</p>
	C.	Best view: Deliver enough investment to deliver against WPD's 'best view' (most realistic) of future network requirements and volumes of anticipated LCTs	✓	✓	✓	✓	£1,095m (£622m base case; £473m subject to an uncertain mechanism volume driver)	Ensure sufficient available capacity to meet the most likely projections for LCTs. Enables WPD to drive ambitions of some regions higher by having capacity ready and available to enable them to go further and quicker in the transition to net zero.	
	D.	Maximum view: Deliver enough investment to deliver against any of the of the three net zero compliant scenarios from the Distribution Future Energy Scenarios	✓	✓	✗	✗	£2,269m	Ensure sufficient available capacity to meet the highest conceivable projections for LCTs. Some risk of investment too far in advance of need, well ahead of when capacity is reasonably expected to materialise	

	E.	<i>Proactive:</i> Engage every LA to understand their requirements to better inform our network planning and enhance the granularity and accuracy of our forecasting	✓	✓	✓	✓	£1.6m	Provide advanced sight and greater certainty of WPD's network capacity so that customers planning new connections can better plan ahead and make longer term investments. Ensure the local energy requirements in each of our regions are fully understood and feed into our long term planning.	Offered: Key to the accuracy and granularity of WPD's forecasting will be to understand from each LA's specifics plans and low carbon energy aspirations. As part of these conversations there are opportunities not only for WPD to learn and account for these plans, but also to share our own modelling and potential network investments in order to support LAs to build more ambitious proposals and earlier targets for the achievement of net zero (which has consistently been a top priority for WPD's stakeholders). There are options for how proactive WPD should be in relation to this action, ranging from the maximum number of meetings per year (allowing a period of time for reasonable change and development between meetings) through to the minimum that would still achieve the desired outcomes. We therefore offered:																														
	F.	<i>Proactive:</i> Engage every LA to help develop their Local Area Energy Plans (LAEPs)	✓	✓	✓	✓		Influencing and driving up the ambitions of LA net zero plans (not just passively facilitating) by helping LAs and developers to create local energy plans that are achievable and help to deliver a network ready for the future.	<table><tr><th></th><th>Option 1:</th><th>Option 2:</th><th>Option 3:</th><th>Option 4:</th><th>Option 5:</th></tr><tr><td>Ambition level:</td><td>Hold 15 Local Energy Surgeries for local authorities per year</td><td>30 per year (one per WPD local operating region)</td><td>60 per year (two per WPD local operating region)</td><td>90 per year (three per WPD local operating region)</td><td>Even further ambition / an alternative (uncapped)</td></tr><tr><td>Bill impact</td><td>-0.5p</td><td>No bill impact</td><td>+0.5p</td><td>+1p</td><td>-</td></tr></table> <table><tr><td>Ambition level:</td><td>Engage every local authority (130) and local enterprise partnership once every five years</td><td>Once every three years</td><td>Once every two years</td><td>Once every year</td><td>Even further ambition / an alternative (uncapped)</td></tr><tr><td>Bill impact</td><td>-1p</td><td>No bill impact</td><td>+0.5p</td><td>+1p</td><td>-</td></tr></table>		Option 1:	Option 2:	Option 3:	Option 4:	Option 5:	Ambition level:	Hold 15 Local Energy Surgeries for local authorities per year	30 per year (one per WPD local operating region)	60 per year (two per WPD local operating region)	90 per year (three per WPD local operating region)	Even further ambition / an alternative (uncapped)	Bill impact	-0.5p	No bill impact	+0.5p	+1p	-	Ambition level:	Engage every local authority (130) and local enterprise partnership once every five years	Once every three years	Once every two years	Once every year	Even further ambition / an alternative (uncapped)	Bill impact	-1p	No bill impact	+0.5p	+1p	-
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	G.	Proactive: Community energy surgeries					£1.6m	Community groups with less knowledge and expertise of the connections process receive tailored support to develop their schemes and connect to the network. This will increase their confidence and understanding of our processes, so that they find it easier to gain access to our network.	<p>Offered:</p> <p>Stakeholders identified supporting community energy projects as one of the highest priorities for WPD in relation to driving innovation and new services, given the large numbers of people in local communities it could benefit. They see a key role for community energy groups in the low carbon transition, both in terms of installing green, renewable generation but also for communities to increasingly flexibility services. We recognise that our local communities have a key role to play in achieving our net zero goals. We are committed to engaging with, and supporting our communities' bespoke climate and energy plans with 43% of the UK's community energy groups operating within WPD's network area.</p> <p>We currently support nearly 100 community energy organisations, comprising over 12,000 members, who collectively own 100MW of renewable capacity. As many community energy groups are largely volunteer-based, some groups struggle to keep up with rapidly developing policy and changes to our energy system.</p> <p>There are options for how proactive WPD should be in relation to this action, ranging from the maximum number of meetings per year (allowing a period of time for reasonable change and development between meetings) through to the minimum that would still achieve the desired outcomes. We therefore offered:</p> <table><tr><td></td><td>Option 1:</td><td>Option 2:</td><td>Option 3:</td><td>Option 4:</td><td>Option 5:</td></tr><tr><td>Ambition level:</td><td>-</td><td>Hold 30 Community Energy Surgeries per year (one per WPD local operating region)</td><td>60 per year (two per WPD local operating region)</td><td>90 per year (three per WPD local operating region)</td><td>Even further ambition / an alternative (uncapped)</td></tr><tr><td>Bill impact</td><td>-</td><td>No bill impact</td><td>+1p</td><td>+2p</td><td>-</td></tr></table>		Option 1:	Option 2:	Option 3:	Option 4:	Option 5:	Ambition level:	-	Hold 30 Community Energy Surgeries per year (one per WPD local operating region)	60 per year (two per WPD local operating region)	90 per year (three per WPD local operating region)	Even further ambition / an alternative (uncapped)	Bill impact	-	No bill impact	+1p	+2p	-
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Consideration of wider alternatives:

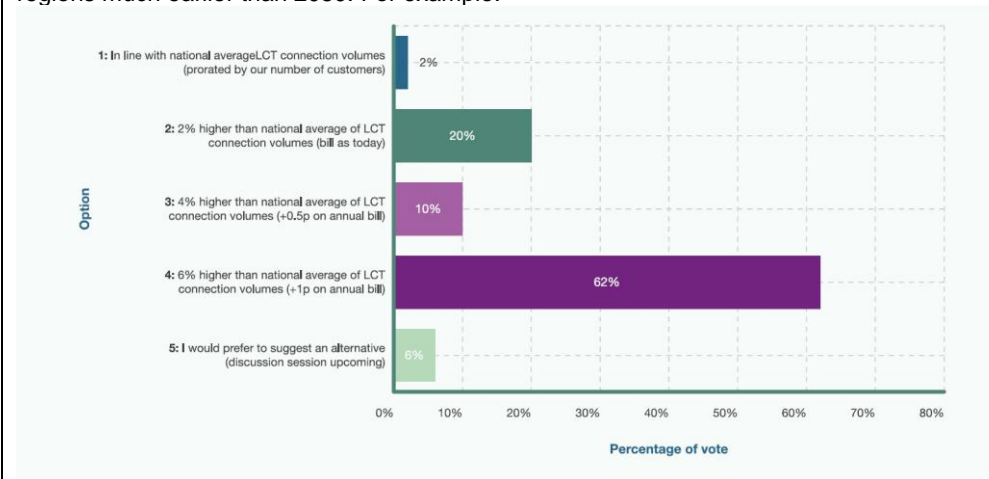
As key enablers to this overarching core commitment there are a number of ambitious new actions, as well as stretches to existing performance, that WPD has committed to deliver. WPD's co-creation events resulted in a large number of unprompted stakeholder suggestions in relation to this area. Of these, the vast majority are wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. For example:

Topic: Predict future changes and uptake of localised WPD future energy scenarios	
Stakeholder created actions	Included in WPD's Plan?
a) Invest ahead of need to keep pace with future energy changes on the network, increasing capacity in areas of predicted need and ensuring reasonable cost of connection	Yes
b) Take a cross-utility approach, working collaboratively with local authorities, industry, government, developers, energy providers	Yes
c) Drive innovation in this area	Yes
d) Take a whole system approach to future energy scenarios, including nuclear	Yes
e) Strategically focus on outages, localised isolation points and alternative connection paths with regard to renewables	No – N/A
f) Conduct horizon scanning	Yes

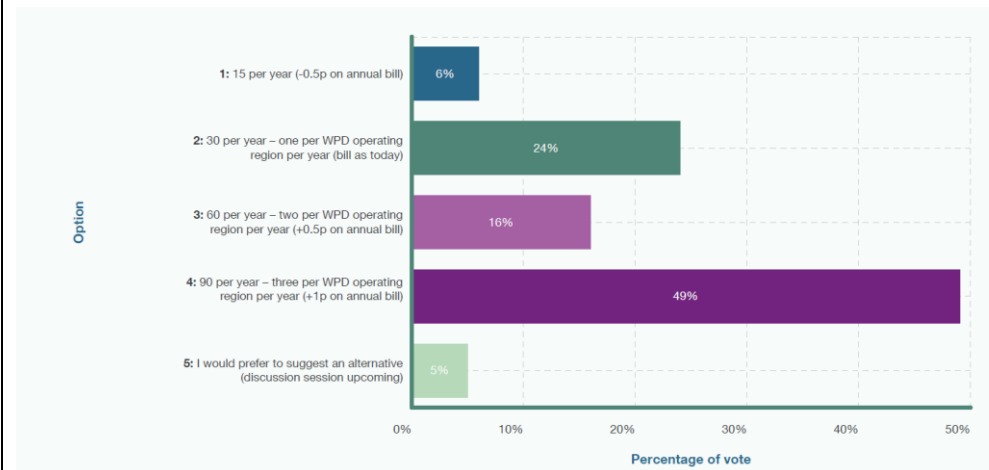
	g) Participate in Welsh Government planning to better respond to future energy changes	Yes
	h) Invest in, and facilitate, battery storage	No – licence condition restricts ability to do this
	i) Monitor evidence and plan long term	Yes
	j) Make use of vehicle to ride technology	Yes
	k) Consider the National Planning Policy Framework	Yes
	l) Make use of embedded generation and create local grids	Yes
	m) Lobby for regional regulatory variations: map and create district area scenarios	Yes
	n) Model current distribution vs predicted changes to customer use and demand	Yes
	o) Participate in a statutory forum to establish cross-utility collaboration	Yes
	p) Roll out the work you do with Energy Capital (West Midlands Planning Authority Scheme)	Yes
	q) Invest in the local network	Yes
	Topic: Where reinforcement is required, ensure it is future proof	
	Stakeholder created actions	Included in WPD's Plan?
	a) Lobby for investment ahead of need in areas of the network where certain criteria are met, whilst minimising risk of stranded assets	Yes
	b) Work with local authorities to clearly identify where to reinforce for growth in housing and EVs in line with local plans	Yes
	c) Install three phase supplies	Yes
	d) Strategically reinforce the network to prioritise demand and generation that meet net zero targets	No – licence condition restricts ability to do this
	e) Consider changing the charging mechanisms on reinforcement so that developers cannot hoard capacity	Yes
	f) Keep pace with the latest innovations and renewable technologies and ensure they are future-proofed	Yes
	g) Ensure that reinforcement is future-proofed, albeit with early investment	Yes
	h) Lead the conversation to support new systems, including by working with developers	Yes
	i) Lobby for additional clarity on government policy and an end to gas in new homes	No
	j) Publish a plan for EV charging	Yes
	k) Ensure that you have enough capacity in the network	Yes
	l) Adopt a localised approach	Yes
	m) Support those communities who are off the gas grid	Yes
	n) Ensure that your plans are affordable for all customers	Yes
	o) Work with developers to incentivise smarter reinforcement approaches in line with DSO	Yes – see approach to flexibility
	p) Consider the impact of climate change (e.g. flooding) when reinforcing	Yes
	q) Adopt a consistent, long term approach to reinforcing the network	Yes

<p>3. Costs are efficient and benefits of the actions plausibly outweigh the costs</p>	<p>We propose to invest around £6.7 billion in the network across the period 2023-2028. This is an increase of around £1.4 billion from current levels. This will deliver significant benefits to customers and move us towards the achievement of net zero carbon emissions in the UK. It is driven primarily by an increase in reinforcement of the network – which is absolutely essential to facilitate the move to net zero carbon emissions.</p> <p>Our current calculations estimate that the impact of the increased expenditure above would result in an approximate £3.37 increase on the average domestic bill if all other elements of the price control were unchanged. However, we predict that this will be offset by our efficiencies, changes to the financing parameters and other aspects of the RIIO-ED2 framework. At present, the combination of these changes means that we intend to keep our portion of bills broadly flat across the five year period 2023-2028. By contrast our willingness to pay research reveals that the value placed by customers on the achievement of WPD connecting LCTs significantly quicker than the national average and therefore helping to achieve net zero much earlier than 2050 across our regions, (at £1.24 per year, per customer) significantly outstrips the costs of delivery and any potential bill increase associated with this expenditure.</p> <p>WPD's proposals to drive the earlier achievement of net zero in our regions have been scoped out in detail, including very specific outcomes, based on extensive discussions with stakeholders. If we did not deliver on these priorities and expenditure remained at today's levels (£1.05bn per year), based on the financing assumptions we expect for RIIO-ED2, bills could be reduced. However, the additional expenditure proposed for RIIO-ED2 is to deliver the commitments stakeholders have told us are essential. This expenditure will see WPD deliver against key government policy goals, by delivering our responsibility to drive the UK's achievement of net zero carbon emissions. The benefits of delivering this commitment will likely be only fully felt and measured over a period far longer than RIIO-ED2. The work will support the UK's net zero aspirations and the government's Ten Point Plan by ensuring that the electricity network is capable of achieving this well ahead of the government's overall target of 2050 for those LA regions that plan to do so.</p> <p>The granularity and accuracy of our forecasts for the future has never been better and represents the most realistic view of LCT uptake across our region, thanks to significant input from every LA in our region. Alternatives to this approach could have included:</p> <p>1) Low ambition changes only</p> <ul style="list-style-type: none"> - The cost of only reinforcing the network and expanding capacity when absolutely necessary - This will have lower short term costs, but may result in significantly higher costs over the long term as reinforcement may need to be done several times to expand to meet future requirements. The 108% increase in load related expenditure WPD is proposing for RIIO-ED2 could therefore be increased significantly by return work on the same circuits, which would be inefficient and lead to significant cost increases in the longer term for customers. - This option would have lower forecasted carbon benefits, as there would be delays before all potential LCTs could connect <p>2) Ambitious forecast scenarios are chosen before the customer need is revealed</p> <ul style="list-style-type: none"> - Higher initial upfront costs, but less reinforcement needed in the future - However this introduces risk of unnecessary work being undertaken – burdening customers with higher costs and bill increases for works that may not actually be needed
<p>4. Customers, as well as stakeholders, support the Business Plan</p>	<p>As set out in detail in Annex 5, stakeholders repeatedly highlighted the need for WPD to demonstrate leadership in relation to net zero and to ensure we not only facilitate the needs of local regions, but play a role in actively driving up these ambitions. Overall there was wide agreement that more engagement is needed and that LAs and enterprise partnerships need to work more closely with WPD to deliver aligned energy plans and streamline the sharing of information. Stakeholders specifically raised the need to increase engagement to assess if there are gaps in EV charging infrastructure and mentioned having a local contact so they can see whether LA plans match those of WPD.</p>

At the Business Plan development phase, there was very clear views from stakeholders that WPD must drive the achievement of net zero in our regions much earlier than 2050. For example:



A very clear majority of 62% wanted WPD to enable connections of LCTs at significantly greater levels than the national average. In relation to our work with Local Authorities to drive this change, a similarly clear majority wanted to see the maximum level of ambition, meeting with them up to three times a year in each WPD operating region.



	<p>At the Business Plan refinement stage, stakeholders requested a separation between WPD's own achievement of net zero (based on our business carbon footprint) and the actions we will take to enable local regions to achieve net zero overall, by dates much sooner than the government target of 2050. There was acknowledgement that LAs are going at different paces and not all will be ready by 2030, but WPD needs to be able to provide sufficient capacity for those that are. Almost all stakeholders felt that 2050 was much too late and WPD had a key role to drive earlier achievement (see WPD's Synthesis report 3).</p> <p>This has since therefore become a new, standalone commitment that came out of our initial Business Plan testing. When undertaking final Business Plan acceptance testing, it revealed that a strong majority of our customers (79%) supported this commitment.</p>
5. Customers are not exposed to unacceptable risks	<p>If WPD under delivers against this commitment, we will incur reputational penalties as part of the Output Delivery Incentive (ODI). In addition, in terms of primary and secondary load related expenditure WPD is proposing an uncertainty mechanism so that costs are only recovered if requirements are triggered above WPD's base case view, up to our best case. This will be on a volume driver basis and will be upwards against our ex-ante base case view. We will provide annual volumes of projects profiled for the base case view across all load related expenditure categories, and where volumes delivered are in excess of those profiles, an annually triggered uncertainty mechanism based on the unit costs and volumes delivered will be applied to adjust allowed recovery upwards. This therefore removes any risk for customers of WPD over-recovering for expenditure that is not required, with additional costs to customers on passed on where the need has materialised on the network, leading to greater reinforcement costs to provide the required capacity.</p>
6. Assurance undertaken	<p>As part of this work, WPD undertook detailed Future Energy Scenarios engagement to ensure that while new capacity is set to reduce the cost of net zero long term, this is balanced with affordability for customers, especially not disadvantaging the vulnerable or the fuel poor.</p> <p>This engagement with local authorities will continue throughout the process, to provide assurance that not only are WPD's projections detailed and well evidenced now, but that they will continue to be updated as work is delivered throughout RIIO-ED2.</p>

Commitment 2: Electric vehicles (EVs) and heat pumps

Ensure customers are able to connect low carbon technologies quickly and easily, with the network being ready to connect at least an additional 1.5 million electric vehicles and 600,000 heat pumps by 2028.	
Justification criteria:	WPD action:
Desired outcome - agreed with stakeholders (see Annex 5)	Customers can easily connect LCTs without delays due to a lack of available network capacity. We will enable volumes of LCTs in our region that enable the achievement of net zero well in advance of 2050, driving up the ambitions of local regions.
1. Actions are appropriate for a DNO	<p>Decarbonisation of transport, heating and electricity production necessitate more EVs, heat pumps and distributed generation all of which will connect to the distribution system. Many of these LCTs will be connected at lower voltages, making it vital to ensure that there is sufficient capacity for the LCTs to connect.</p> <p>WPD will proactively identify parts of the network that are heavily loaded and provide more capacity. We will use smart meter data, increased amounts of network monitoring and enhanced analysis to identify where network reinforcement is required. We will also look at ways in which the LCT loads can be managed to make greatest use of existing network capacity, which may involve steps including controlling when EVs are charged.</p> <p>Together, these proactive actions will enable more LCTs to connect overall and in shorter timescales and at lower cost than if conventional reinforcement were required.</p> <p>WPD's expertise and position is unique for the delivery of this commitment and we are well placed to deliver it to our customers. This is due to our expertise in electrical engineering and in the connection and installation of LCT solutions, as well as our experience in providing an excellent customer service.</p> <p>The Electricity Distribution Licence states that the Licensee is responsible for the development, maintenance and operation of an efficient, coordinated, and economical Distribution System, as well as for the facilitation of effective competition in the generation and supply of electricity and (so far as is consistent with that) the promotion of such competition in the sale, distribution, and purchase of electricity (Condition 22 – Distribution Connection and Use of System Agreement). RIIO-ED2 Business Plan guidance sets out the baseline expectations in regards to a DSO transition.</p>
2. Considered alternative approaches (and options presented were sufficiently ambitious)	<p><u>Why did we offer these options / evidence of appropriate ambition:</u></p> <p>While areas of government policy are certain, such as the achievement of net zero by 2050 and a ban on the sale of petrol and diesel vehicles by 2030, the exact pace of change to deliver these outcomes is less clear. WPD must therefore plan for a wide range of scenarios. In terms of how to deliver the outcome of ensuring that customers can connect key LCTs, the widespread adoption of which are integral to the achievement of net zero in Great Britain, there are seemingly three key options to consider:</p>

	Options considered:	Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?																		
	A. WPD to gear up for a base case (minimum likely) projection of LCTs connecting to the system (e.g. appropriate resources to match the projected work volumes and utilisation of flexibility and network reinforcement to provide sufficient capacity in a timely fashion)	✓	✓	✓	✓																		
	B. WPD to gear up for a Best View case (most realistic) projection of LCTs connecting to the system (e.g. appropriate resources to match the projected work volumes and utilisation of flexibility and network reinforcement to provide sufficient capacity in a timely fashion)	✓	✓	✓	✓																		
	C. WPD to gear up for a range of uptake DFES up to a maximum view projection of LCTs connecting to the system (e.g. appropriate resources to match the projected work volumes and utilisation of flexibility and network reinforcement to provide sufficient capacity in a timely fashion)	✓	✓	✓	? (stakeholders do not always feel best placed to speak on the specific volumes and modelling, but are keen that WPD goes at pace that drives the transition to net zero, including enabling volumes of LCT connections significantly higher than the national average (see below))																		
<p>During the Business Plan development phase our original optioneering regarding the readiness of the network to accommodate LCTs was originally quantified as achieving levels above the national average volumes, as this was the language and scale of outcome stakeholders used in the initial co-creation events.</p> <table> <tr> <th></th><th>Option 1:</th><th>Option 2:</th><th>Option 3:</th><th>Option 4:</th><th>Option 5:</th></tr> <tr> <td>Make it as easy as possible for our customers to connect LCTs, such that WPD connects more than the national average connecting in the UK (prorated by our customer numbers)</td><td>In line with national average LCT connection volumes (prorated by our number of customers)</td><td>2% higher than national average of LCT connection volumes</td><td>4% higher than national average of LCT connection volumes</td><td>6% higher than national average of LCT connection volumes</td><td>Even further ambition / an alternative (uncapped)</td></tr> <tr> <td>Bill impact:</td><td>-0.5p</td><td>No bill impact</td><td>+0.5p</td><td>+1p</td><td>-</td></tr> </table> <p>A very high proportion of stakeholders (72% wanted to see greater ambition than option 2, with a large majority of 62% favouring WPD connecting 6% higher than the national average. However, stakeholders subsequently asked for better quantification, which we provided in terms of potential volumes of Electric Vehicles (EVs) and heat pumps. We did so for WPD's Best View, which prepares for an increase on the base case view (therefore akin to offering greater than the national average in the original options). The costs associated with this activity are covered in the load relation reinforcement Totex outlined in the justification for commitment 1 (enabling net zero in our communities) above, which ensures the network is ready to achieve this specific core commitment 2, in relation to LCT volumes. To avoid double counting, the costs presented to stakeholders in relation to LCT volumes therefore did not duplicate the expenditure for core commitment 36, but included the costs for some addition Network Strategy Engineers that will be needed to plan the network for these enhanced levels of LCTs.</p> <p>The full range of options considered in relation to potential scenarios for LCT uptake are therefore outlined in detail in WPD's Business Plan strategic summary, DSO strategy and Appendix 6a: Load Related Expenditure. As a summary, the volumes of EVs and HPs considered were:</p>							Option 1:	Option 2:	Option 3:	Option 4:	Option 5:	Make it as easy as possible for our customers to connect LCTs, such that WPD connects more than the national average connecting in the UK (prorated by our customer numbers)	In line with national average LCT connection volumes (prorated by our number of customers)	2% higher than national average of LCT connection volumes	4% higher than national average of LCT connection volumes	6% higher than national average of LCT connection volumes	Even further ambition / an alternative (uncapped)	Bill impact:	-0.5p	No bill impact	+0.5p	+1p	-
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WPD Best View	2023 (start of RIIO-ED2)	2028 (end of RIIO-ED2)	Volumes delivered in RIIO-ED2
Electric vehicles	548,427	2,078,872	1,530,445
Heat pumps	264,850	893,053	628,203

The WPD Best View is a single scenario which is used to inform forecasting market information, regulatory reporting, network datasets and future business plans. It is derived from bespoke assessments of LAEPs and local delivery capability to enable WPD to assign a DFES for each Local Authority and hence all substations within that area.

Were a consistent scenario to come to pass that applies across all LA areas, the DFES outline the range of credible pathways to 2050 for the change in connections to the distribution network. These local stakeholder informed projections are created on an annual cycle and encompass changes in demand, storage and distributed generation, including electrified transport and heat. In summary the various outlooks to 2030 for total EVs and HPs are:

Data Source	Scenario	Electric vehicles		Heat pumps	
		2030 total provided in Ofgem Business Plan Guidance apportioned to WPD licence areas	2030 WPD Best View totals used in RIIO-ED2 Business Plan	2030 total provided in Ofgem Business Plan Guidance apportioned to WPD licence areas	2030 WPD Best View totals used in RIIO-ED2 Business Plan
National Grid Electricity System Operator: Future Energy Scenarios 2020	Leading the Way	3,084,557	3,199,371	1,986,795	1,201,665
	Consumer Transformation	2,945,132		1,558,707	
	System Transformation	1,268,851		467,518	
Climate Change Committee: 6th Carbon Budget	Balanced Net Zero Pathway	4,565,541		1,385,475	
	Headwinds	3,650,265		1,047,788	
	Tailwinds	4,488,889		1,289,017	
	Widespread Engagement	4,734,829		1,494,764	
	Widespread Innovation	4,505,473		1,347,444	

Consideration of wider alternatives:

As key enablers to this overarching core commitment there are a number of ambitious new actions, as well as stretches to existing performance, that WPD has committed to deliver. WPD's co-creation events resulted in a large number of unprompted stakeholder suggestions in relation to this area. Of these, the vast majority are wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. For example:

Topic: Facilitate EV on a mass scale	
Stakeholder created actions	Included in WPD's Plan?
a) Work closely with local authorities and developers on local energy plans, develop case studies and produce examples of best practice	Yes
b) Work on providing useful data on EV charging and capacity and share this with relevant third parties	Yes
c) Carry out research and forecasting on EV take up to inform your strategy	Yes
d) Focus on delivering charging points for company fleets and for public transport	Yes – WPD's EV strategy focuses on all aspects of transport including domestic, commercial and public

	e)	Work with key stakeholders, particularly developers on EV charging	Yes
	f)	Collaborate with EV and charging infrastructure manufacturers and endeavour to innovate in this area	Yes
	g)	Plan proactively for the impacts of climate change	Yes
	h)	Undertake 'quick' feasibility studies for charge point connections, including for homeowners	Yes
	i)	Consider different ownership models and to support a move away from private, individual car ownership	No – licence conditions prevent this
	j)	Consider the wider economic impact of a wholesale move to EVs - what happens to combustion engine-era vehicles?	No – beyond WPD's role
	k)	Focus on long term strategies to reduce charging costs for the consumer	No – licence conditions prevent this
	l)	Develop battery storage technology	No – beyond WPD's role
	m)	Provide clear information on connection, capacity and charging costs	Yes
	n)	Avoid being a blocker for optimal sites	Yes – the purpose of WPD's actions are to ensure that capacity is never a blocker to viable sites. However, we cannot discriminate by selecting LCT schemes over other connection types.
	o)	Be mindful of future grid capacity	Yes
	p)	Work with community groups	Yes
	q)	Help to facilitate large-scale charging hubs	Yes
	r)	Invest ahead of need in the network to ensure enough capacity	Yes
	s)	Consider cost: who will pay? How can costs be minimised?	No
	t)	Support communal, on-street charging projects	Yes
	u)	Consider all low carbon vehicle / transport options as well as EVs	No – beyond WPD's role
	v)	Focus on the quantity of charge points	Yes
	w)	Reconsider the structure of connection charges	No
	x)	Lobby for changes to the NPPF to support uptake of EVs	No – beyond WPD's role (government policy)
	y)	Encourage more local generation to power charge points	Yes – the purpose of WPD's actions are to ensure that capacity is never a blocker to viable sites. However, we cannot discriminate by selecting LCT schemes over other connection types.
	z)	Consider alternative charge point models e.g. induction pads	Yes – part of WP's innovation programme to test the network impact of different charge solutions. However, it is beyond WPD's role to actually develop different charging technologies
	Topic: Facilitate EV take up and infrastructure		
	Stakeholder created actions		Included in WPD's Plan?
	a)	Improve communication on EVs to build consumer confidence	Yes – in relation to EV connections to the grid. WPD cannot favour specific technology types however.

	b) Lobby government for a national EV policy	No
	c) Enable the installation of more charge points	Yes
	d) Make clear the costs of connections for EV charge point installers and developers	Yes
	e) Work towards facilitating the roll out and best usage of street-side EV charge points	Yes
	f) Input into planning requirements to encourage EV take up	Yes
	Topic: Facilitate heat pump take up	
	Stakeholder created actions	Included in WPD's Plan?
	a) Lobby Government to encourage the take up of heat pumps and mandate them in in new builds	No – beyond WPD's role (government policy)
	b) Ensure you can invest ahead of need to ensure that there is enough capacity in the network and reinforce the network where necessary	Yes
	c) Educate customers to foster understanding of heat pumps and their benefits	Yes
	d) Engage with developers and LAs to drive uptake through the planning process	Yes – in relation to planning for HP connections to the grid. WPD cannot favour specific technology types however.
	e) Roll out trials and innovations projects (similar to Electric Nation) to promote models to encourage take up, with tariffs to incentivise customers	Yes – WPD's heat pump strategy will include potential for innovation schemes in this area in RIIO-ED2, subject to Ofgem approval and agreement of innovation funding.
	f) Drive innovation in this area, for example fifth generation district heating	Yes
	g) Make clear the investment needed on the network and in retrofitting older properties to prepare for heat pumps	Yes
	h) Create a heat strategy plan that takes into account implications of a mass take up of heat pumps	Yes
	i) Socialise the costs	No – beyond WPD's role (Ofgem/government policy)
	j) Adopt a whole systems approach, looking at the comparative cost of electricity and gas for heating homes	Yes – WPD has launched a whole systems strategy
	k) Look at local energy generation to accommodate the increased demand	Yes – WPD's rollout of flexibility services and support for community energy schemes
	l) Work with industry to ensure that heat pumps are affordable	No – beyond WPD's role
	m) Provide financial incentives	No – beyond WPD's role (must remain agnostic on technology types)
	n) Also facilitate take up of PVs, battery storage and district heating	Yes
3. Costs are efficient and benefits of the actions plausibly outweigh the costs	<p>This commitment will facilitate a wide availability of EV connection points and heat pumps for our customers and ensure its secure connection. It will also enable the decarbonisation of transport and heating, with the overall benefit of minimising the impact of climate change. While the process to connect and network capacity itself does not deliver benefit, this 'enabler' will be significant in terms of delivering net zero for the UK as a whole.</p> <p>We propose to invest around £6.7 billion in the network across the period 2023-2028. This is an increase of around £1.4 billion from current levels. This will deliver significant benefits to customers and move us towards the achievement of net zero carbon emissions in the UK. It is driven primarily by an increase in reinforcement of the network – which is absolutely essential to facilitate the move to net zero carbon emissions.</p>	

	<p>Our current calculations estimate that the impact of the increased expenditure above would result in an approximate £3.37 increase on the average domestic bill if all other elements of the price control were unchanged. However, we predict that this will be offset by our efficiencies, changes to the financing parameters and other aspects of the RIIO-ED2 framework. At present, the combination of these changes means that we intend to keep our portion of bills broadly flat across the five year period 2023-2028. By contrast our willingness to pay research reveals that the value placed by customers on the achievement of WPD connecting LCTs significantly quicker than the national average and therefore helping to achieve net zero much earlier than 2050 across our regions, (at £1.24 per year, per customer) significantly outstrips the costs of delivery and any potential bill increase associated with this expenditure.</p> <p>WPD's proposals to drive the earlier achievement of net zero in our regions have been scoped out in detail, including very specific outcomes, based on extensive discussions with stakeholders. If we did not deliver on these priorities and expenditure remained at today's levels (£1.05bn per year), based on the financing assumptions we expect for RIIO-ED2, bills could be reduced. However, the additional expenditure proposed for RIIO-ED2 is to deliver the commitments stakeholders have told us are essential. This expenditure will see WPD deliver against key government policy goals, by delivering our responsibility to drive the UK's achievement of net zero carbon emissions. The benefits of delivering this commitment will likely be only fully felt and measured over a period far longer than RIIO-ED2. The work will support the UK's net zero aspirations and the government's Ten Point Plan by ensuring that the electricity network is capable of achieving this well ahead of the government's overall target of 2050 for those LA regions that plan to do so.</p>												
<p>4. Customers, as well as stakeholders, support the Business Plan</p>	<p>During WPD's Social Value Research, stakeholders advocated that we should play a prominent role in actively encouraging uptake of EVs on a mass scale, including pre-emptively reinforcing the network to ensure sufficient capacity. They told us that EVs should be a key consideration when upgrading or building new infrastructure, to provide easy access to chargers, especially in rural areas. During the Business Plan development phase, stakeholders revealed that they would be keen to see WPD facilitate LCT uptake, and make this as easy as possible, particularly by removing capacity issues. They stated that the more distributed power, the better. Stakeholders felt that WPD's projected LCT uptakes are likely to happen and that associated industries are capable of delivering. Our stakeholders want us to meet the increased demand of LCT take up. In our first draft Business Plan, we committed to ensure that connections could be effectively made within our area. After consulting with our stakeholders the results are shown in the figure below:</p>  <table border="1"> <thead> <tr> <th>Option</th> <th>Percentage of vote</th> </tr> </thead> <tbody> <tr> <td>1: In line with national average LCT connection volumes (prorated by our number of customers)</td> <td>2%</td> </tr> <tr> <td>2: 2% higher than national average of LCT connection volumes (bill as today)</td> <td>20%</td> </tr> <tr> <td>3: 4% higher than national average of LCT connection volumes (+0.5p on annual bill)</td> <td>10%</td> </tr> <tr> <td>4: 6% higher than national average of LCT connection volumes (+1p on annual bill)</td> <td>62%</td> </tr> <tr> <td>5: I would prefer to suggest an alternative (discussion session upcoming)</td> <td>6%</td> </tr> </tbody> </table>	Option	Percentage of vote	1: In line with national average LCT connection volumes (prorated by our number of customers)	2%	2: 2% higher than national average of LCT connection volumes (bill as today)	20%	3: 4% higher than national average of LCT connection volumes (+0.5p on annual bill)	10%	4: 6% higher than national average of LCT connection volumes (+1p on annual bill)	62%	5: I would prefer to suggest an alternative (discussion session upcoming)	6%
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4: 6% higher than national average of LCT connection volumes (+1p on annual bill)	62%												
5: I would prefer to suggest an alternative (discussion session upcoming)	6%												

	<p>A very high proportion of stakeholders (72%) wanted to see greater ambition than option 2, with 62% favouring WPD connecting “6% higher than the national average”. Stakeholders felt that high volumes of LCTs are essential in RIIO-ED2 if the UK is to successfully transition to net zero as early as possible. A quality, simple service is therefore essential to encourage adoption of LCTs. Overall, our stakeholders agreed with making LCT connections but asked us to be clearer on the actual levels of connections. We have since reworded the commitment to specify the minimum number of electric vehicle charging connections and heat pumps included in our plan.</p> <p>The Business Plan acceptance testing revealed that a strong majority of our customers (82%) supported this commitment.</p>
5. Customers are not exposed to unacceptable risks	<p>If WPD under delivers against this commitment, we will incur reputational penalties as part of the ODI. WPD has a long experience in ensuring that its network has the adequate capacity and technical expertise for multiple connections. Innovation projects such as DynaCov, Electric Nation – Powered Up, Electric Vehicle Emissions Testing and Temporary Event Charging brings insights and experience to WPD’s engineers that will be essential to enable the uptake of EVs.</p> <p>In addition, in terms of primary and secondary load related expenditure WPD is proposing an uncertainty mechanism so that costs are only recovered if requirements are triggered above WPD’s base case view, up to our best case. This will be on a volume driver basis and will be upwards against our ex-ante base case view. We will provide annual volumes of projects profiled for the base case view across all load related expenditure categories, and where volumes delivered are in excess of those profiles, an annually triggered uncertainty mechanism based on the unit costs and volumes delivered will be applied to adjust allowed recovery upwards. This therefore removes any risk for customers of WPD over-recovering for expenditure that is not required, with additional costs to customers on passed on where the need has materialised on the network, leading to greater reinforcement costs to provide the required capacity.</p>
6. Assurance undertaken	<p>As mentioned above, WPD has undertaken significant engagement with LAs, charge point operators, fuel station operators, vehicle manufacturers, transport operators, and the UK and Welsh governments to ensure that our plans align with other key parties. These groups have all had the chance to input and challenge WPD’s plans and targets, providing assurance that we are on track.</p>

Commitment 10: Net zero business carbon footprint

Achieve net zero in our internal business carbon footprint (BCF) by 2028 (excluding network losses) and follow a verified science based target of 1.5°C to limit the climate impact of our activities.	
Justification criteria:	WPD action:
Desired outcome - agreed with stakeholders (see Annex 5)	Accelerate a reduction in carbon emissions and WPD's overall BCF to minimise our impact on climate change as soon as possible.
1. Actions are appropriate for a DNO	<p>This commitment addresses the direct impact of WPD's operations on the environment. The UK government has set a legal obligation for the UK to achieve net zero carbon emissions by 2050 and therefore major companies have a key role to play to reduce our BCF in line with this target date, or earlier. Our internal BCF amounted to 76,987 tCO₂e (tonnes of carbon dioxide equivalent) in 2019/2020 (WPD Environment and Innovation Report 2019-2020). Our network is spread over 55,500km², so there is a need for a significant fleet of vehicles to serve that territory effectively, such as running maintenance of substations and overhead lines to ensure high network reliability standards. Our business's nature and dimension also require the utilisation of multiple buildings such as offices and substations. These carbon reduction activities are therefore required to drive the scale of impact necessary.</p> <p>As a DNO, WPD is expected by customers, stakeholders and the regulator to go further than other companies/industries – leading the way towards net zero. Stakeholders have strongly urged WPD (it is one of their highest priorities – see Supplementary Annex SA-05) to demonstrate leadership in this area by driving down our own carbon emissions at the same time as facilitating the ambitious net zero aspirations of devolved local regions. WPD is well placed to meet this ambition, with the required experience to plan the initiatives to help reach the target and the staff, connections and knowledge to deliver and track the results.</p>
2. Considered alternative approaches (and options presented were sufficiently ambitious)	<p><u>Why did we offer these options / evidence of appropriate ambition:</u></p> <p>Of the options considered in relation to the achievement of net zero in our own BCF it is important to not the following:</p> <p>Losses: As per Ofgem rules, WPD's BCF does not include network losses. WPD is not in direct control of losses as they are a natural function of the network and also dependent on external factors such as the type of electricity generation upstream of the distribution network (e.g. losses on wind generated energy already contains no carbon). Losses can therefore be reduced but not eliminated and WPD has a separate losses strategy and action plan to ensure we are driving down losses as much as possible until all generation in the UK becomes green. All generators must be net zero by 2050, so by that stage all losses will become net zero compliant as they will be losses on green sourced energy</p> <p>Scope 3 emissions: These are included in our BCF in relation to business miles, air, rail and road. Scope 3 in relation to contractors are not required as part of UN Science Based Initiative (SBTi), however we are working with our supply chain to reduce these as much as possible in RIIO-ED2, and will review as part of SBTi compliance audit whether the threshold for including them in our BCF changes later in the RIIO-ED2 period. We have recognised in our Environmental Action Plan that there are opportunities associated with both Scope 3 and embodied carbon and have committed that these will be captured and addressed. We have set out the methodology for how we will achieve this but we're not currently in a position to accurately quantify and set baselines and targets, but will do so as soon as this is possible. This will develop throughout the remainder of RIIO-ED1 and throughout RIIO-ED2. This goes significantly beyond the expectations Ofgem has set for this area as industry</p>

standard practice; it is therefore unclear why this would be used by CEG as a reason to state this commitment is not fully justified on the grounds of ambition, when it goes significantly beyond best practice.

In relation to the achievement of net zero within WPD's BCF, we therefore considered the following options before consulting with stakeholders:

Options considered:		Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?	Cost	Benefit	Considerations and final decision:
A.	Do nothing: Net zero by 2050 – legally compliant	✗	✓	✓	✗	-1p average domestic bill impact	Achieve net zero in line with legal compliance but no quicker. WPD would therefore continue to emit carbon into the environment for the 27 years from 2023-2050.	<p>Offered and rejected: This would dramatically under-deliver against strong stakeholder feedback that WPD should demonstrate leadership in relation to achieving net zero as early as possible, irrespective of the cost. There is a consistent view that expenditure today will not be a waste, as it avoids deferring it to a later period when it is considered to be an inevitable requirement.</p> <p>This option would also be contrary to our values, in failing to demonstrate leadership and delivery sustainability. Simply waiting to become net zero by 2050, replacing equipment only in line with its natural end of life would cause an unacceptable environmental impact of the next 27 years (2023-2050) that is entirely avoidable, and stakeholders are insistent they want us to address.</p>
B.	Slightly accelerate: 2043 – with no offsetting	✓	✓	✓	Tested & rejected	0p average domestic bill impact	Achieve net zero 7 years ahead of the government target and legal obligation of 2050.	<p>Offered and rejected: Stakeholders have been very clear that they want us to be a role model for delivering the government target of net zero by earlier than 2050 and we see this as an essential action in line with our strategy to be the top performing, leading DNO in relation to delivery of a low carbon, smart future. The urgency to delivery net zero earlier than 2050 was therefore clear, but the precise pace of this acceleration was not.</p> <p>As part of our engagement phases one and two, we heard from knowledgeable stakeholders that they were passionate about WPD reducing carbon emissions, by at least as early as 2030, aligning with the common aims of LAs in our region. We found that end user bill payers were less supportive of dramatic accelerations in targets and did not express a high willingness to pay to achieve net zero earlier than 2050. We therefore offered stakeholders the full range of timing options from 2050 through to the earliest this could realistically be achieved of 2028 (by the end of the RIIO-ED2 period).</p> <p>In order to arrive at the options to consult on, we therefore divided the 22 years between 2050 and 2028 evenly to offer different options for stakeholders to consider in relation to the pace of this achievement, and the costs and bill impacts of the different accelerations. In addition, we offered stakeholders the option to suggest entirely different alternatives and/or to select a target somewhere between the options initially offered for stakeholder consideration.</p>

	C.	2035 – with no offsetting	✓	✗	✓	✗	Not costed for stakeholders as it is currently not possible to achieve without offsetting	Achieve net zero 15 years ahead of the government target and legal obligation of 2050.	<p>Offered and rejected: WPD tested with stakeholder appetite for achieving net zero by 2035, irrespective of whether it requires offsetting or not, and it was rejected as not being ambitious enough. The role of offsetting cannot be certain; however based on present day knowledge it is likely it will not be technologically possible to achieve net zero by 2035 with zero offsetting as there are currently a lack of viable low carbon in key areas.</p> <p>Without offsetting, 2043 is the earliest certainty date to achieve net zero based on current, ambitious projections. This is due to the timescales for viable technological alternatives to become widely available in a number of areas; for example, the maximum number of WPD vehicles that can be fully electric by 2028 is 89% as there are currently no electric or hydrogen options for some of the largest, specialist vehicles in our fleet. Moreover, while there are now vacuum-based alternatives to SF₆ in some switchgear, this is not at all voltage levels and it is expected that these alternatives will not be available (therefore enabling the wholesale removal of SF₆ from the electricity system) until late in the 2030s. Once these are available, there then has to be the cost/benefit consideration of how quickly all SF₆ should be removed from the system as this will result in expensive asset replacement costs for customers, in some case switching out fully-functional switchgear (the condition of which is posing a very small risk of leakage) well ahead of its projected lifespan.</p> <p>The achievement of network by earlier than 2043 will therefore require differing levels of carbon offsetting to achieve them, with a commitment from WPD that these will always be kept to a minimum. Stakeholders delivered conflicting views on the role carbon offsetting should play; however we have been transparent that in order to achieve a target of 2028 greater levels will be required than if the target were 2035 or 2043. Noting this area of stakeholder concern we have scoped out the use of Greenhouse Gas removal schemes that deliver best value for customers including a commitment to only utilise UK-based initiatives with a community focus and added amenity value and/or wellbeing impact for local people. This will include partnering with key ethical partners including the Heart of England Forest Project, Trust for Conservation Volunteers and Carbon Neutral Britain.</p>
	D.	2035 – with offsetting	✓	✓	✓	Tested & rejected	+1p average domestic bill impact	Achieve net zero 15 years ahead of the government target and legal obligation of 2050.	<p>Offered and rejected: See response to rows B and C.</p>
	E.	2028 – with offsetting (79% fleet replaced at end of life)	✓	✓	✓	Tested & rejected	Cost of £48m for 79% fleet replacement above natural replacement programme for internal combustion engine vehicles	Achieve net zero 22 years ahead of the government target and legal obligation of 2050, but with more reliance on Greenhouse Gas removal schemes than is absolutely necessary.	<p>Offered: Based on present day knowledge and the technologies currently available, the only route to achieve net zero by 2028 will require some greenhouse gas removal schemes (due to the lack of zero carbon alternatives for the largest, specialised vehicles in our fleet. However the need for these schemes is not definite, and WPD will do everything it can to avoid the need for them and if developments occur within the RIIO-ED2 which means we can achieve net zero without the need for any offsetting we will do so. Therefore, internal 'insetting' activities may contribute to reducing our BCF by 2028 without the use of 'offsetting' but this will only become clear in the period. Our Environmental Action Plan sets out clearly how we will provide transparency on this to stakeholders and Ofgem.</p> <p>The speed with which we tackle our own BCF and therefore the extent to which we must utilise Greenhouse Gas removal schemes was available for stakeholder consultation and review. The</p>

F.	2028 – With minimum offsetting (89% fleet replaced at end of life)	✓	✓	✓	✓	Cost of £89m for 89% fleet replacement above natural replacement programme for internal combustion engine vehicles	Achieve net zero 22 years ahead of the government target and legal obligation of 2050, with the minimum reliance on Greenhouse Gas removal schemes technologically possible.	overwhelmingly key contributor to this commitment is the decarbonisation of WPD's transport fleet. The fastest this can be achieved without an accelerated intervention would be to replace all vehicles at their natural end of life with a non-combustion engine alternative, which currently projections indicate can be achieved for 79% of our fleet. Were this option to be selected, a greater number of Greenhouse Gas removal initiatives would be required. The maximum amount of fleet that can be accelerated and replaced by 2028 is 89%, which leaves on our largest, specialist vehicles for which there are currently no low carbon alternatives. As reviewed by the Research Subgroup of the Customer Engagement Group, in all stakeholder research on this topic, including deliberative focus groups and stated preference surveys, respondents were given key context regarding the requirements for offsetting/Greenhouse Gas removal and the limitations on how much of WPD's fleet can be replaced currently based on the technology available was outlined for.
G.	2028 – with no offsetting	✓	✗	✗	N/A	N/A		Rejected: This is technologically impossible to achieve for the reasons set out in row C.

Consideration of wider alternatives:

As key enablers to this overarching core commitment there are a number of ambitious new actions, as well as stretches to existing performance, that WPD has committed to deliver. WPD's co-creation events resulted in a large number of unprompted stakeholder suggestions in relation to this area. Of these, the vast majority are wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. For example:

Topic: Net zero in business carbon footprint	
Stakeholder created actions	Included in WPD's Plan?
a) Set cumulative targets on emissions reductions to reach net zero	Yes
b) Reduce emissions rather than offset carbon, if commercially viable	Yes

Topic: Carbon emissions from WPD vehicle fleet	
Stakeholder created actions	Included in WPD's Plan?
a) Set a target for zero carbon emissions from your fleet. For example, by 2030	Yes
b) Replace smaller vehicles with EVs and larger vehicles with biogas or hydrogen	Yes
c) Monitor all transport associated with your business, using telematics, to reduce the number of miles travelled	Yes
d) Encourage and incentivise your staff to use more sustainable methods of transport, such as public transport, bikes and car sharing	Yes
e) Improve remote monitoring, using drones rather than helicopters	Yes
f) Install and expand EV charge points at depots and office car parks	Yes

Topic: Impact on local environment and biodiversity	
Stakeholder created actions	Included in WPD's Plan?
a) Use Science Based Targets to improve biodiversity, aiming for a net gain	Yes
b) Put in an ambitious tree replacement programme (E.g. planting two trees for every one removed) and promote this good work	Yes

	c) Work in partnership with environmental groups such as Wildlife Trusts	Yes
	d) Create an environmental fund which can be accessed by local groups	Yes
	e) Partner with parish councils, local authorities and nature reserves on biodiversity and environmental initiatives	Yes
	f) Avoid placing infrastructure on flood plains	Yes
<p>In addition to the above examples, stakeholders recommended 58 actions in relation to the associated topics below, of which over 90% are included in WPD's Plan as wider commitments:</p> <ul style="list-style-type: none"> • Reducing harmful leaks from WPD's equipment • Reducing the carbon footprint of WPD's buildings • Plastic usage • Waste sent to landfill • WPD announcing a climate emergency • Sustainable procurement 		

3. Costs are efficient and benefits of the actions plausibly outweigh the costs

Summary of analysis

WPD will be able to reduce over two thirds of its carbon footprint to zero by 2028. In the meantime, as we await the technologies to address the remaining third, offsetting will achieve excellent additional benefits for our local region in the meantime – demonstrably lowering carbon in the atmosphere. It will see us invest in the localised area via tree planting and the creation of new carbon sinks (via peat bogs etc) as well installing solar PV to allow others to reduce their emissions. We will not purchase carbon credits but invest in measures to benefit our local communities, via accredited schemes. Our commitment is focused on the outcome of reducing our net impact on carbon emissions to zero. The alternative would be to set a target for net zero in our operations alone by c.2043 without the added benefit of offsetting action. But we are instead proposing to drive additional environmental benefits in the meantime, at a cost of less than an additional 1.5p on the average domestic customer bill.

Against a total spend of £89 million (£79 million in present value) over the five year RII0-ED2 period, we have conducted the following cost benefit analysis in relation to the social cost of carbon and direct savings as a result of this core commitment as follows:

Activity	Benefit type	Total benefit (non-discounted)	Total emissions avoided (tonnes CO2e)	Benefit period
EV fleet conversion	Societal - Carbon emissions	£1,759,251	30,386	6 years
	Societal – Air quality	£1,412,565	-	6 years
	Avoided costs	£21,817,944	-	6 years
EV charging infrastructure	Avoided costs	£15,638,911	-	5 years
Renewable energy in offices and depots	Societal - Carbon emissions	£274,790	3,394	10 years
	Avoided costs	£3,310,651	-	10 years
Company car scheme	Societal - Carbon emissions	£481,704	8,201	6 years
	Societal – Air quality	77,748	-	6 years
Reduced energy use in buildings	Societal - Carbon emissions	£211,735	2,720	10 years
	Avoided costs	£2,038,598	-	10 years
Emissions offsetting	Societal - Carbon emissions	£10,545,049	133,320	10 years
		£75,277,664	195,407	

While the selected option is not quite cost beneficial, it comes very close. All options considered were cost/benefit deficient, based on a similar ratio. For example, were WPD to only replace 79% of fleet by 2028, while this would reduce our costs, it would also reduce the carbon savings and operational savings (e.g. cost of continued fuel vs electric charging).

In the context of the small cost benefit deficiency revealed in this option, it is then important to consider this in the broader stakeholder context of overwhelming stakeholder support for WPD to demonstrate leadership by achieving net zero by 2028, and to do so by maximising all decarbonisation actions that are technologically feasible. Customers place significant value on the achievement of this outcome, with a mean value of £3.89 per customer, as revealed by WPD's willingness to pay research (see Supplementary Annex SA-05), resulting in a total of £32.9 million per year across WPD's customer base. The total expenditure for this commitment per year is £17.8m which equates to 32p per customer, which is outstripped significantly by the value placed on it by customers.

WPD's expenditure in this area totals £89 million (£79 million in present value) over five years and comprises of:

1. Convert 89% of our operational fleet to EVs
2. EV charging at key operational sites
3. Non-carbon technology company cars
4. PV generation at suitable sites
5. Renewable energy for buildings
6. Reduce energy use in our buildings
7. 'Excellent' BREEAM rating for all buildings
8. Minimise carbon emissions through reduction in business travel
9. Small-scale battery powered generation

For a number of these, WPD's expenditure and the costs benefit analysis undertaken to ensure that costs are efficient in relation to key contributory actions to this overall commitment are set out in various EJPs. Of these, the most significant is £63.7m associated with the electrification of WPD's vehicle fleet. WPD is proposing a Price Control Deliverable (PCD) for this expenditure. This means that Ofgem will agree an efficient cost level for this activity, and it will also provide a mechanism to hand back revenues if there is under delivery.

In addition, in order to drive the most efficient cost approach, WPD's EJP for fleet electrification considers a wide range of options and factors in order to arrive at the optimal commitment and expenditure level. For example:

Ref	Description	Contributes to Primary Driver	Achieves WPD Commitment	Statutorily Compliant	Technically Feasible	Cost Effective	Confident in Outcome	Deliverability Risk	Discount Option
3	Achieve 79% of EVs (lease hire) Replace 1,549 vehicles (to achieve 79% of LCV fleet) based on natural end of life with EVs leased by WPD.	✓	✗	N/A	✓	✓	✗	MED	YES
4	Achieve 89% of EVs (ownership) Replace 1,834 vehicles (to achieve 89% of LCV fleet) based on natural end of life with EVs purchased by WPD.	✓	✓	N/A	✓	✓	✓	LOW	NO
5	Achieve 89% of EVs (Lease Hire) Replace 1,834 vehicles (to achieve 89% of LCV fleet) based on natural end of life with EVs leased by WPD.	✓	✓	N/A	✓	✓	✗	MED	NO
6	Achieve 100% of EVs (ownership) Replace 2,145 vehicles (to achieve 100% of LCV fleet) based on natural end of life with EVs purchased by WPD.	✓	✓	N/A	✗	✗	✗	HIGH	YES
7	Achieve 100% of EVs (Lease Hire) Replace 2,145 vehicles (to achieve 100% of LCV fleet) based on natural end of life with EVs leased by WPD.	✓	✓	N/A	✗	✗	✗	HIGH	YES

Detailed analysis and cost benefit considerations:

The benefits of this commitment – at a high level – consist of avoided costs for the business, and a rapid increase in the reduction of carbon emissions produced by the business. For RIIO-ED2 the strategy presented in our Business Plan, chosen following stakeholder consultation is to replace 88.9% of our light commercial vehicle fleet with a pure electric vehicle by April 2028 where a suitable alternatives exist. This is based on the original 1,537 vehicles identified in our RIIO-ED2 2019 first draft replacement programme; through stakeholder consultation the programme

will accelerate the replacement of 284 ICE vehicles for EVs originally scheduled for RIIO-ED3 period. The total number of vehicles in the RIIO-ED2 replacement programme is therefore 1,821, enabling 100% of the WPD LCV fleet to be EV during 2030 of RIIO-ED3.

In terms of environmental justifications, there are very clear impacts set out below, including 40,000 tonnes of CO₂e within RIIO-ED2, and 10,000 tonnes every year following. In terms of economic justification, it is true that replacing the vehicles early will increase costs relative to doing nothing (as the upgrade costs are not completely cancelled out by the improved running costs). However, the support for bringing this forward from stakeholders is overwhelming, including considerable willingness to pay for WPD lowering its carbon footprint to net zero, of which this action is critical. Over the duration of RIIO-ED2 our modelling assumed that vehicle costs will remain at 2021 levels. In addition, the economic impact of higher upfront costs will be comfortably offset over the lifetime of the vehicle as a result of the significantly lower running costs that will therefore result in lower operational expenditure as follows:

In regards to savings over the lifetime of an EV compared to an ICE:

	Electric vehicle - cost over lifetime	Internal combustion engine vehicle - cost over lifetime	Total Savings
Fuel/Electricity Cost	£5,400	£21,000	£15,600
Servicing Cost	£1,675	£3,909	£2,234
Vehicle Excise Duty	-	£2,750	£2,750

The various initiatives (listed below) have significant impact as, based on customer and stakeholder feedback, they are the most ambitious option (from those that were feasible).

The initiatives were determined largely by where WPD's current emissions lie – targeting at source to ensure only minimal offsetting is required to meet net zero by 2028. The initiatives include:

EV replacement of the operational fleet

a) Costs:

There is an incremental cost of £63.7 million over RIIO-ED2 to deliver this replacement.

b) Societal benefit:

We have estimated the number of vehicles (by type) that can currently be replaced with an EV alternative (89% of our fleet). This, when modelled using the type of vehicle, the average miles driven per year, average mpg, and the appropriate conversion factors leads to a reduction of ~40k tonnes of CO₂e within RIIO-ED2, and 10k tonnes every year following.

When using the appropriate traded cost of carbon and subtracting for conversion that would have taken place on a current glide path (deadweight), this delivers an additional benefit of £1.76m over 6 years (modelled up to when it would have become mandatory).

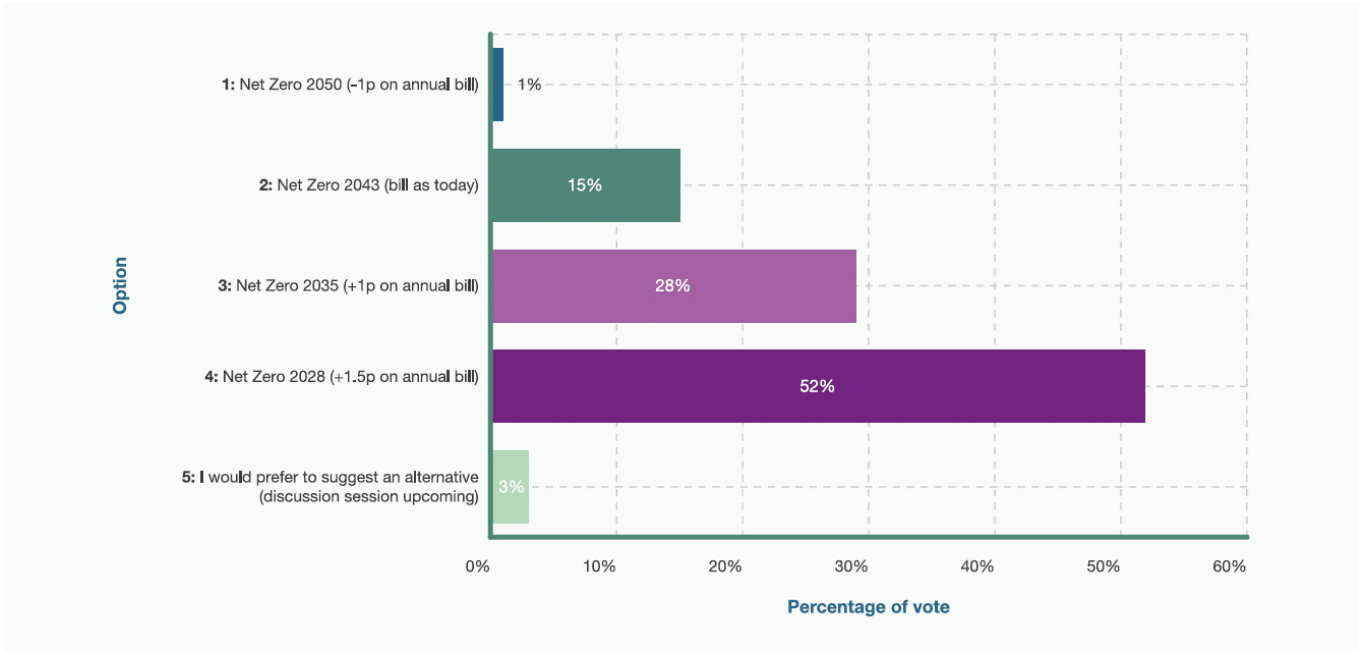
c) Financial benefit:

We have also calculated the annual savings due to this replacement. This consists of reduced maintenance, avoided fuel cost and avoided vehicle excise duty.

This benefit, considering the number of vehicles replaced, amounts to £21.8m over 6 years.

EV charging infrastructure

	<p>a) Costs: There is a cost of £14.5 million over RIIO-ED2 to install EV charging infrastructure.</p> <p>b) Financial benefit: Significant savings will be realised through avoided public charging costs and reduced lost time for WPD staff being able to charge at WPD sites. Over the RIIO-ED2 period, these amount to £15.6m in savings.</p> <p><u>Renewable energy generation at offices and depots</u></p> <p>a) Costs: It is forecasted to cost £4.0 million over RIIO-ED2 to install generation where possible. Societal benefit. We have estimated the amount of electricity that can be produced from our offices and depots - 2,703 MWh per year once all generation is installed. Assuming an even rollout of installation over the 5-year period and using the traded cost of carbon and projected emissions factor for grid electricity and PV generation, this delivers a benefit of £275k over the 10-year period.</p> <p>b) Financial benefit: Once all capacity is installed, we have calculated this will result in electricity savings of £473k per year using the cost of electricity. We have assumed a gradual progression over RIIO-ED2, reaching the total savings from 2028/2029 onwards. This results in £3.3 million benefit over 10 years (non-discounted).</p> <p><u>Company car scheme</u></p> <p>a) Costs: No additional cost over current Business as Usual.</p> <p>b) Societal benefit: We have set a target to have all company cars be non-carbon by 2025, with a total of 1,055 cars. Considering the current number of non-carbon cars, we have estimated that 236 cars will have to change to a non-carbon option every year up to 2025. We have considered that this target would have not been in place under the original 2043 target and therefore all emissions from RIIO-ED2 efforts relating to this initiative were included. Assuming that each car drives 9,169 miles per year, 75% of cars left to convert are petrol and 25% are diesel (based on current split) we can calculate the emissions saved per year using the respective emissions factor for diesel and petrol cars versus a battery powered car. This results in 8,201 tonnes of CO₂e saved over 6 years, which valued at the traded carbon cost adds up to £482k (non-discounted).</p> <p><u>Reduced energy use in buildings</u></p> <p>a) Costs: A total of £6 million over RIIO-ED2 is required for the necessary energy efficiency upgrades.</p> <p>b) Societal benefit: We have analysed our property portfolio to assess each building's energy usage and performance. Our 23 worst performing properties from this analysis have been subject to further assessment, from this we estimate that upgrades can save up to 320.1 tonnes CO₂e per year. Using the traded cost of carbon this results in £211k saved over 10 years (non-discounted), considering a 1-year benefit lag.</p> <p>c) Financial benefit: We have calculated annual savings due to the improvements to be carried out to our 23 worst performing buildings.</p>
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	<p>The values match those included in CBA009 General Building Refurbishment Programme, reaching up to £240k in savings per year.</p> <p>These add up to £2.0 million over 10 years (non-discounted).</p> <p>d) Alternatives.</p> <p>Given the net loss from this activity (costs exceeding benefits), the alternative would be additional offsetting to reach the target. With stakeholders' feedback in mind, WPD has selected the option where only minimal offsetting is required.</p> <p>Emissions offsetting</p> <p>a) Costs:</p> <p>£1.0 million is set aside for the remaining emissions of RIIO-ED2 to be reduced through offsetting.</p> <p>b) Societal benefit:</p> <p>By 2028, we estimate that approx. 19,500 tonnes CO₂e would need to be offset to achieve net zero. This accounts for other reductions which have or will take place during RIIO-ED1 as well as the use of a REGO tariff for electricity. We have used a traded carbon price to estimate the benefits of this, which equate to £10.5m over 10 years.</p>												
<p>4. Customers, as well as stakeholders, support the Business Plan</p>	<p>As Supplementary Annex SA-05 outlines, a clear majority of stakeholders wanted to see the maximum level of ambition of option 4, net zero by 2028. 61% of surveyed end user customers agreed. Only 3% of stakeholders selected option 5 to request an alternative approach, indicating that stakeholders considered the options presented to be in the correct range and sufficiently ambitious.</p>  <table border="1"> <thead> <tr> <th>Option</th> <th>Percentage of vote</th> </tr> </thead> <tbody> <tr> <td>1: Net Zero 2050 (-1p on annual bill)</td> <td>1%</td> </tr> <tr> <td>2: Net Zero 2043 (bill as today)</td> <td>15%</td> </tr> <tr> <td>3: Net Zero 2035 (+1p on annual bill)</td> <td>28%</td> </tr> <tr> <td>4: Net Zero 2028 (+1.5p on annual bill)</td> <td>52%</td> </tr> <tr> <td>5: I would prefer to suggest an alternative (discussion session upcoming)</td> <td>3%</td> </tr> </tbody> </table>	Option	Percentage of vote	1: Net Zero 2050 (-1p on annual bill)	1%	2: Net Zero 2043 (bill as today)	15%	3: Net Zero 2035 (+1p on annual bill)	28%	4: Net Zero 2028 (+1.5p on annual bill)	52%	5: I would prefer to suggest an alternative (discussion session upcoming)	3%
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	<p>In relation to the electrification of WPD’s fleet, while 40% of stakeholder favoured the lower ambition (replace 79% of fleet), a combined majority of 55% wanted to see greater ambition. Coupled with the insights on stakeholder’s strong preference for net zero to be achieved as soon as possible, and recognising the critical dependency of this achievement on the electrification of our fleet, we propose to deliver the increased ambition of 89%. While more customers wanted to see 100% of fleet replaced, we have since further investigated this possibility and this will require new technological developments for larger vehicles for which there are currently no zero carbon alternatives.</p>
	<div><div><div>Option</div><div><div>1: Not applicable</div><div>2: Replace vehicle at end of life: 79% commercial van fleet to be non-carbon vehicles by 2028 (bill as today)</div><div>3: Accelerated programme: 89% commercial van fleet to be non-carbon vehicles by 2028 (+19p on annual bill)</div><div>4: Accelerated programme: 100% commercial van fleet to be non-carbon vehicles by 2028 (+19p on annual bill)</div><div>5: I would prefer to suggest an alternative (discussion session upcoming)</div></div><div><div>40%</div><div>22%</div><div>33%</div><div>5%</div></div></div><div><div>0%</div><div>10%</div><div>20%</div><div>30%</div><div>40%</div><div>50%</div></div><div>Percentage of vote</div></div>
5. Customers are not exposed to unacceptable risks	<p>In addition, WPD’s acceptance testing revealed that a very high level of 80% of customers supported this initiative.</p> <p>If WPD under delivers against this commitment, we will incur reputational penalties as part of the ODI. This commitment is also submitted as a Consumer Value Proposition (CVP) due to the proposal’s significant additional value above business as usual. If WPD cannot deliver the value associated with the CVP, WPD will return any reward associated with delivery.</p> <p>In order to minimise the risk to customers of any potential under delivery WPD is proposing a Price Control Deliverable (PCD) associated with the replacement of vehicles in order to electrify our fleet, which will ensure revenue is only received for activities and volumes undertaken. In addition, the overall commitment to achieve net zero by 2028 is proposed as a CVP, which will have penalties and clawback mechanisms in place to recover costs from WPD if this commitment target is missed.</p> <p>This commitment accelerates the reduction in carbon emissions with a direct positive impact on the UK’s carbon footprint. Having tracked and reduced WPD’s BCF over RIIO-ED1, the environmental and transport teams are well placed to understand the work involved in delivery and to meet the ambitious targets set.</p>
6. Assurance undertaken	<p>WPD’s published BCF data, the methodology, assumptions, and calculations have been verified and data assured for accuracy and compliance with various standards – including the Greenhouse Gas (GHG) reporting protocol. WPD’s performance in this area will also be presented and</p>

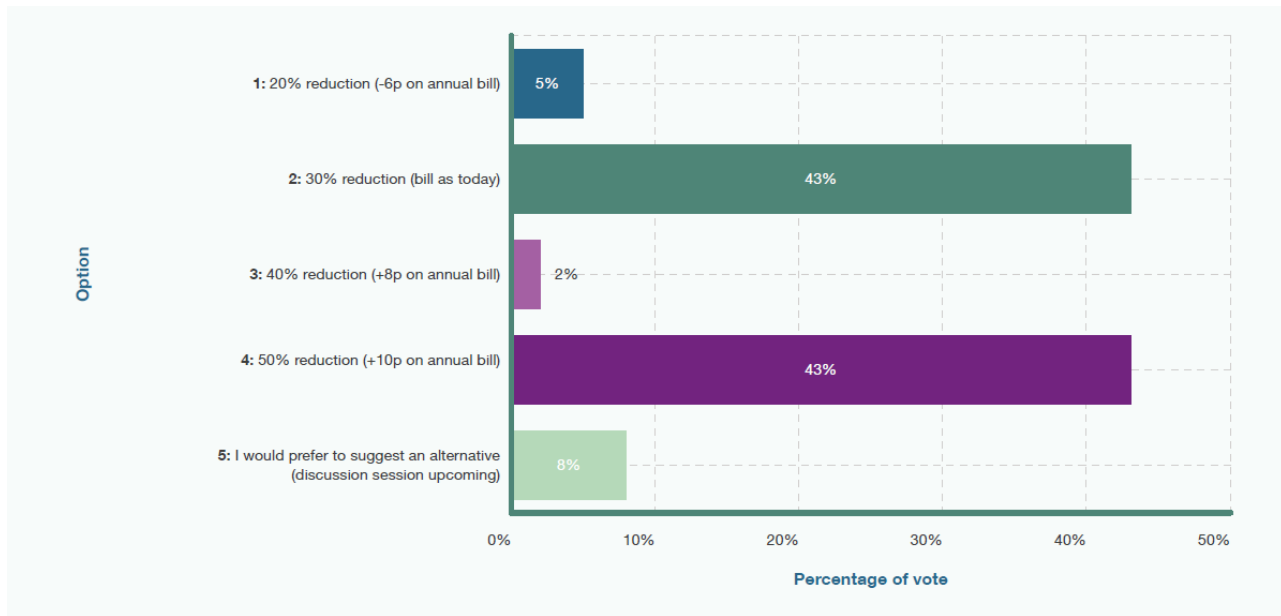
	<p>externally audited as part of the ISO14001 Environmental Management accreditation standard each year. The commitment is in line the scope of the Environmental, Social and Governance (ESG) rating and assessment that WPD will voluntarily undergo each year.</p> <p>Our previous reporting is provided under Ofgem and UK legislative (Streamlined Energy Carbon Reporting) requirements. Ofgem also requires the annual publication of an environment report as part of the Environmental Action Plan to enable comparisons of delivery outcomes between DNOs.</p> <p>As part of the preparation for RIIO-ED2 and in collaboration with external consultants, WPD has already carried out the required scoping exercise covering Scope 3 emissions. With this in hand, we are now in the process of submitting our proposed Science Based Target (SBT) to be verified by the UN Science Based Initiative (SBTi). Following this 1.5°C target will assure that our target is Science Based, and therefore will meet the goals of the Paris Agreement - limiting global warming to well below 2 degrees above pre-industrial levels. The SBT will be subject to review again in 2026, therefore midway through the RIIO-ED2 period, as which point the decision of whether scope 3 emissions should be included will also be reviewed.</p>
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Commitment 11: Leakage from fluid filled cables

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.								
Justification criteria:		WPD action:						
Desired outcome - agreed with stakeholders (see Annex 5)		Significantly reduce the risk of harm to the local ecology and protect habitats and speciefies in the regions we operate in.						
1. Actions are appropriate for a DNO		This commitment addresses the direct impact of WPD’s operations on the environment. Leakages from fluid filled cables can cause a significant environmental impact, including posing potential serious risks to biodiversity, controlled waters and land contamination. Stakeholders have strongly urged WPD to take action to mitigate our impact on the environment, with this issue consistently rated as a high priority at every overarching stakeholder event.						
2. Considered alternative approaches (and options presented were sufficiently ambitious)		Why did we offer these options / evidence of appropriate ambition:						
Options considered:		Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?	Cost	Benefit	Considerations and final decision:
A.	Do nothing, reactive only: Only address and replace fluid filled cables at point of leakage	✗	✓	✓	✗	Zero (fault response costs only)	Detrimental environmental impact – leaks continue.	Rejected: This option would be contrary to all stakeholder feedback to date, which places a very high priority on WPD reducing our impact on the environment wherever possible. It would go against our values to demonstrate leadership in relation to environmental performance and sustainability, contradict our Social Contract and place us at risk of being in breach of environmental legislation.
B.	Maximum: Remove all 726km of fluid filled cables from the network	✓	✓	✗	✗	£727m	Total removal of oil leak risk from cables on the WPD network.	Rejected: Given that the profile of leakage is tailing off due to years of investment and the major improvements delivered in RIIO-ED1, this option is not cost efficient as it would require expensive asset replacement to switch out fully-functional equipment (the condition of which is posing very small risk of leakage) well ahead of its projected lifespan. By contrast, targeted asset replacement via early leakage detection and prioritising assets with the poorest health condition will ensure the most efficient spend for customers and deliver actions that deliver the greatest overall environmental benefit. Were WPD to seek to bring forward the replacement of all fluid filled cables (that are currently in good condition and operating effectively) in the interests of removing all potential environmental impact risk this could actually cause negative environmental impacts. For example, we must consider the embodied carbon associated with the manufacturing, transport and installation processes of asset replacement activity, which would be caused as a result of bringing forward the asset replacement of non-leaking equipment.

	C.	Maintain current replacement levels in line with RIIO-ED1: 20% reduction in the volume of oil leaks and 60km of worst performing circuits replaced	✓	✓	✓	Tested & rejected	£61m	Reduction in the volume of oil leaking into the environment in line with the target level specified.	<p>Offered:</p> <p>In the current RIIO-ED1 period we are successfully delivering a dramatic 75% reduction in fluid filled cable oil losses, across an 8 year period (achieving a 55% in the first 5 years). Stakeholders have been clear that this needs to continue to be a key focus are in RIIO-ED2, but as a result of the worst performing circuits having already been addressed, continuing at a comparable level of asset replacement would lead to a lower improvement rate. The precise leakage rate also differs year-on-year as it is closely linked to ground conditions and movements causing damage to fluid filled underground cables and therefore it was necessary to take a multi-year view to understand WPD's underlying rate of leakage.</p> <p>Given that the profile of leakage is tailing off due to years of investment, yet recognising the huge impact on local ecosystems and communities in the event of major leaks particularly during dry summers, we gave stakeholders a range of options as follows. We also offered stakeholders the option to suggest entirely different alternatives and/or to select a target somewhere between the options initially offered for stakeholder consideration. In addition, in recognition of the continued high priority placed by stakeholders on this issue, we offered options to replace the worst leaking circuits from broadly in line with current levels (48.5km in the first 5 years of RIIO-ED1) through to an 86% increase in ambition of 90km in 5 years during RIIO-ED2.</p> <table><tr><td></td><td>Option 1:</td><td>Option 2:</td><td>Option 3:</td><td>Option 4:</td><td>Option 5:</td></tr><tr><td>Ambition level:</td><td>20% reduction in oil leaks</td><td>30% reduction</td><td>40% reduction</td><td>50% reduction</td><td>Even further ambition / an alternative (uncapped)</td></tr><tr><td>Bill impact</td><td>-6p</td><td>No bill impact</td><td>+8p</td><td>+10p</td><td>-</td></tr></table> <table><tr><td>Ambition level:</td><td>60km of worst leaking cables replaced</td><td>70km replaced</td><td>80km replaced</td><td>90km replaced</td><td>Even further ambition / an alternative (uncapped)</td></tr><tr><td>Bill impact</td><td>-3.5p</td><td>No bill impact</td><td>+3.5p</td><td>+7p</td><td>-</td></tr></table>		Option 1:	Option 2:	Option 3:	Option 4:	Option 5:	Ambition level:	20% reduction in oil leaks	30% reduction	40% reduction	50% reduction	Even further ambition / an alternative (uncapped)	Bill impact	-6p	No bill impact	+8p	+10p	-	Ambition level:	60km of worst leaking cables replaced	70km replaced	80km replaced	90km replaced	Even further ambition / an alternative (uncapped)	Bill impact	-3.5p	No bill impact	+3.5p	+7p	-
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D.	Increase: 30% reduction in the volume of oil leaks and 70km of worst performing circuits replaced	✓	✓	✓	Tested & rejected	£71.5m	Reduction in the volume of oil leaking into the environment in line with the target level specified – marginally increased activity from RIIO-ED1 levels.																																
E.	Increase: 40% reduction in the volume of oil leaks and 80km of worst performing circuits replaced	✓	✓	✓	Tested & rejected	£81.9m	Reduction in the volume of oil leaking into the environment in line with the target level specified – increased activity from RIIO-ED1 levels.																																
F.	Increase: 50% reduction in the volume of oil leaks and 90km of worst performing circuits replaced	✓	✓	✓	✓	£92.2m	Reduction in the volume of oil leaking into the environment in line with the target level specified – significantly increased activity from RIIO-ED1 levels.																																

	<p>G. <i>Uncapped increase: More than 50% reduction in the volume of oil leaks and more than 90km of worst performing circuits replaced</i></p> <p>✓ ✓ ✓</p> <p>Tested & rejected</p> <p>Reduction in the volume of oil leaking into the environment in line with the target level specified – significantly increased activity from RIIO-ED1 levels, up to 100% removal of fluid filled cables.</p>																								
	<p><u>Consideration of wider alternatives:</u></p> <p>As well as an overarching commitment to mitigate the risk of leaks in the first place, WPD has also rolled out the innovative step of ensuring perfluorocarbon tracer has been added to every high risk oil fluid filled cable circuit to significantly speed up the detection of leaks.</p> <p>In addition, as key enablers to this overarching core commitment there are a number of ambitious new actions, as well as stretches to existing performance, that WPD has committed to deliver. WPD's co-creation events resulted in a large number of unprompted stakeholder suggestions in relation to this area. Of these, the vast majority are wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. For example:</p> <table border="1" data-bbox="544 762 2040 1077"> <thead> <tr> <th colspan="2">Topic: Harmful leaks from WPD equipment</th></tr> <tr> <th>Stakeholder created actions</th><th>Included in WPD's Plan?</th></tr> </thead> <tbody> <tr><td>a) Eliminate the use of SF6 and carry out research to find alternatives</td><td>Yes</td></tr> <tr><td>b) Create a risk assessment of assets containing SF6 and replace assets susceptible to leaks</td><td>Yes</td></tr> <tr><td>c) Set a target for reducing harmful leaks and monitor the environmental impacts</td><td>Yes</td></tr> <tr><td>d) Reduce use of oils</td><td>Yes</td></tr> <tr><td>e) Set clear targets and adopt best practice in terms of regularly inspecting and replacing equipment</td><td>Yes</td></tr> <tr><td>f) Look at examples of best practice from other sectors</td><td>Yes</td></tr> <tr><td>g) Increase the efficiency of transmission</td><td>Yes</td></tr> <tr><td>h) Encourage innovation around heat capturing technologies</td><td>Yes</td></tr> <tr><td>i) Focus on innovation to replace harmful materials</td><td>Yes</td></tr> <tr><td>j) Increased replacement of assets</td><td>Yes</td></tr> </tbody> </table>	Topic: Harmful leaks from WPD equipment		Stakeholder created actions	Included in WPD's Plan?	a) Eliminate the use of SF6 and carry out research to find alternatives	Yes	b) Create a risk assessment of assets containing SF6 and replace assets susceptible to leaks	Yes	c) Set a target for reducing harmful leaks and monitor the environmental impacts	Yes	d) Reduce use of oils	Yes	e) Set clear targets and adopt best practice in terms of regularly inspecting and replacing equipment	Yes	f) Look at examples of best practice from other sectors	Yes	g) Increase the efficiency of transmission	Yes	h) Encourage innovation around heat capturing technologies	Yes	i) Focus on innovation to replace harmful materials	Yes	j) Increased replacement of assets	Yes
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<p>3. Costs are efficient and benefits of the actions plausibly outweigh the costs</p>	<p>When presenting the options to stakeholders, WPD were able to offer to remove 60km of cable for no bill increase and at the same expenditure levels that had replaced 48.5km of cable in the first five years of RIIO-ED1. This is therefore a measure of the ongoing efficiency of our costs insofar as we would be able to deliver increased volumes of activities without increasing costs for customers.</p> <p>A separate Engineering Justification Paper has been produced on WPD's expenditure in relation to fluid filled cables, which follows Ofgem's specified format and will enable WPD's costs to be benchmarked to other DNOs.</p> <p>The delivery of this activity is a highly specialised task with the removal of oil-filled cables and the laying of replacement non-oil cables on the 132KV network carried out by specialist contractors. This will therefore enable WPD to ensure this activity is delivered at the most competitive market rate, by putting this work out to competitive tender, for which the most cost effective contracts will be awarded.</p>																								

	<p>Customers place significant value on the achievement of this outcome, with a mean value of £1.71 per customer, as revealed by WPD's willingness to pay research (see Supplementary Annex SA-05). The total expenditure for this commitment per year equates to 17p per customer, which is outstripped significantly by the value placed on it by customers.</p>												
<p>4. Customers, as well as stakeholders, support the Business Plan</p>	<p>As Supplementary Annex SA-05 outlines, this core commitment has very strong stakeholder and customer support. In relation to the options presented to stakeholders as part of the Business Plan development and refinement stages, a majority of stakeholders wanted to see the maximum level of ambition of option 4 in both cases, with even greater support from surveys with end user bill payers. Only 8% of stakeholders selected option 5 to request an alternative approach, indicating that stakeholders considered the options presented to be in the correct range and sufficiently ambitious.</p>  <table border="1"> <thead> <tr> <th>Option</th> <th>Percentage of vote</th> </tr> </thead> <tbody> <tr> <td>1: 20% reduction (-6p on annual bill)</td> <td>5%</td> </tr> <tr> <td>2: 30% reduction (bill as today)</td> <td>43%</td> </tr> <tr> <td>3: 40% reduction (+8p on annual bill)</td> <td>2%</td> </tr> <tr> <td>4: 50% reduction (+10p on annual bill)</td> <td>43%</td> </tr> <tr> <td>5: I would prefer to suggest an alternative (discussion session upcoming)</td> <td>8%</td> </tr> </tbody> </table>	Option	Percentage of vote	1: 20% reduction (-6p on annual bill)	5%	2: 30% reduction (bill as today)	43%	3: 40% reduction (+8p on annual bill)	2%	4: 50% reduction (+10p on annual bill)	43%	5: I would prefer to suggest an alternative (discussion session upcoming)	8%
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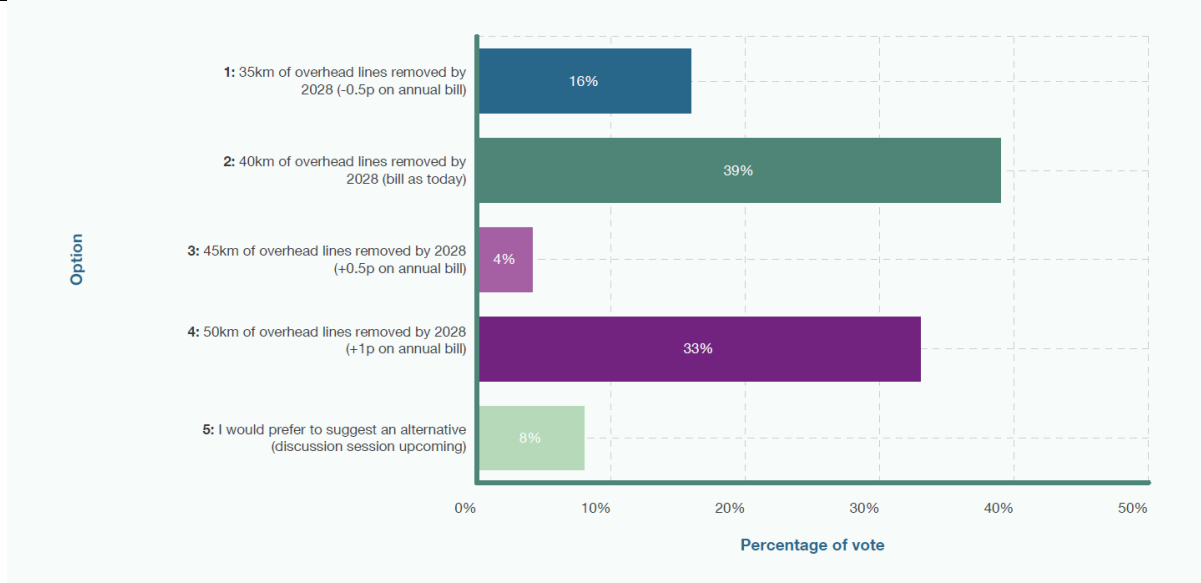
	 <p>Option</p> <table border="1"> <thead> <tr> <th>Option</th> <th>Percentage of vote</th> </tr> </thead> <tbody> <tr> <td>1: 60km of FFC Replacement (-3.5p on annual bill)</td> <td>5%</td> </tr> <tr> <td>2: 70km of FFC Replacement (bill as today)</td> <td>34%</td> </tr> <tr> <td>3: 80km of FFC Replacement (+3.5p on annual bill)</td> <td>10%</td> </tr> <tr> <td>4: 90km of FFC Replacement (+7p on annual bill)</td> <td>46%</td> </tr> <tr> <td>5: I would prefer to suggest an alternative (discussion session upcoming)</td> <td>6%</td> </tr> </tbody> </table> <p>Percentage of vote</p> <p>In addition to the very high levels of stakeholder support for this commitment, 75% of customers supported this initiative as part of WPD's acceptance testing.</p>	Option	Percentage of vote	1: 60km of FFC Replacement (-3.5p on annual bill)	5%	2: 70km of FFC Replacement (bill as today)	34%	3: 80km of FFC Replacement (+3.5p on annual bill)	10%	4: 90km of FFC Replacement (+7p on annual bill)	46%	5: I would prefer to suggest an alternative (discussion session upcoming)	6%
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<p>5. Customers are not exposed to unacceptable risks</p>	<p>We have a very strong track record of delivering improvements in this area. While this is an ambitious commitment and an increase from RIIO-ED1, customers can have confidence that this target and the activity volumes required to deliver it are highly achievable as WPD's environmental and network services teams are therefore well placed to understand the work involved in delivery and to meet the ambitious targets set.</p> <p>If WPD under delivers against this commitment, we will incur reputational penalties as part of the ODI. In addition, achieving a reduction in oil losses is very high on the environment regulator's radar; therefore any under delivery against this commitment would bring significant reputational risk and would bring legal compliance issues regarding pollution prevention and control legislation. Over and above annual reporting to Ofgem, WPD is required to report performance in this area to the Environment Agency in England and Natural Resources Wales to evidence our compliance with environmental standards and legislation.</p>												
<p>6. Assurance undertaken</p>	<p>WPD's performance in this area will be presented and externally audited as part of the ISO14001 Environmental Management accreditation standard each year. Ofgem requires the annual publication of an environment report as part of the Environmental Action Plan to enable comparisons of delivery outcomes between DNOs. In addition, this commitment is in line the scope of the ESG rating and assessment that WPD will voluntarily undergo each year.</p> <p>WPD also reports fluid filled cable leakage rates to Report FFC loss to the Environment Agency in England and Natural Resources Wales and therefore any change in approach/under delivery would be quickly identified and addressed.</p>												

Commitment 14: Undergrounding for visual amenity

Improve visual amenity by removing at least 50km of overhead lines in Areas of Outstanding Natural Beauty (AONBs) and National Parks (NPs)							
Justification criteria:		WPD action:					
Desired outcome - agreed with stakeholders (see Annex 5)		Significantly improve the visual amenity in key beauty spots and outlooks, by removing key strategic overhead lines from AONBs and NPs.					
1. Actions are appropriate for a DNO		This commitment addresses the direct impact of WPD's network assets on the visual amenity of the landscape in beauty spots across our operating region.					
2. Considered alternative approaches (and options presented were sufficiently ambitious)		Why did we offer these options / evidence of appropriate ambition:					
Options considered:		Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?	Cost	Benefit
A.	Do nothing: No undergrounding	✗	✓	✓	✗	£0	No visual amenity benefit.
B.	Maximum: Remove all overhead lines from AONBs and NPs as fast as possible	✓	✓	✗	✗	£575m (£11.50 bill increase per annum)	Majorly enhanced visual amenity, but potential huge ecological damage.
		Rejected: Stakeholders have consistently supported investment to improve visual amenity in AONBs and NPs. At stakeholder events on the RIIO-ED2 options for visual amenity, none selected to do less than present day levels.					
		Rejected: There are over 16,000km overhead lines in AONBs and NPs in WPD's region. AONB and NP representatives have no desire for all lines to be removed in totality – in fact doing so would cause potential ecological, geological and archaeological damage which is a cause of significant concern. Selecting this option for further stakeholder consideration would be contrary to all stakeholder insights gained over the last 10+ years. AONB/NP representatives are clear that in the totality of overhead lines in their regions they only have interest in a very small percentage being underground, prioritising those at the most beautiful outlooks and with maximum visual amenity benefits due to footfall of visitors. There are also serious doubts over the deliverability of this in practice: Were we commit to the total removal of all lines within 20 years for example, this would require the removal of 800km per year, which would represent an 11,000% increase on present day levels (6.9km a year) which AONB/NP representatives already tell us is a stretch to deliver. In addition, given the ecological impact of undergrounding in these sites we would require extensive ecological surveys, incurring high expense. To obtain the necessary licences we would need legal interventions for which we must demonstrate there is a danger to human life that trumps the ecological impact, which will never be secured on the grounds of visual amenity.					

	C.	Accelerate: Maximum number of schemes AONBs and NPs can feasibly project manage	✓	✓	✓	✓	£7.2m	50km of targeted visual amenity schemes, selected by AONBs/NPs as the most impactful and desired sites, avoiding ecological damage.	<p>Selected for stakeholder consideration:</p> <p>In RIIO-ED1 WPD consulted extensively on the eventual target of undergrounding 6.9km per year. The initial draft plan contained a more ambitious proposal of 8.75km per year, which a significant majority of stakeholders asked WPD to reduce in scope and lower our ambitions.</p> <p>Taking all of this into consideration, we therefore proposed in our initial RIIO-ED2 stakeholder consultation a range of costed options offering incremental improvements from the levels currently being delivered in RIIO-ED1 as follows:</p> <table><tr><th></th><th>Option 1:</th><th>Option 2:</th><th>Option 3:</th><th>Option 4:</th><th>Option 5:</th></tr><tr><td>Ambition level:</td><td>35km of overhead lines removed by 2028 (In line with current baseline) (7km per year)</td><td>40km of overhead lines removed by 2028 (8km per year)</td><td>45km of overhead lines removed by 2028 (9km per year)</td><td>50km of overhead lines removed by 2028 (10km per year)</td><td>Even further ambition / an alternative (uncapped)</td></tr><tr><td>Bill impact</td><td>-0.5p</td><td>No bill impact</td><td>+0.5p</td><td>+1p</td><td>-</td></tr></table> <p>As with all options however, we included a 5th option for stakeholder to explicitly state if they wanted an entirely different approach or felt that we should go significantly beyond the options proposed and costed.</p>		Option 1:	Option 2:	Option 3:	Option 4:	Option 5:	Ambition level:	35km of overhead lines removed by 2028 (In line with current baseline) (7km per year)	40km of overhead lines removed by 2028 (8km per year)	45km of overhead lines removed by 2028 (9km per year)	50km of overhead lines removed by 2028 (10km per year)	Even further ambition / an alternative (uncapped)	Bill impact	-0.5p	No bill impact	+0.5p	+1p	-
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D.	Continue: Maintain RIIO-ED1 delivery levels	✓	✓	✓	Tested & rejected	£5m	35km of targeted visual amenity schemes, selected by AONBs/NPs as the most impactful and desired sites, avoiding ecological damage.																				
E.	Various target options between options C & D	✓	✓	✓	Tested & rejected	£5-7m	35-50km of targeted visual amenity schemes, selected by AONBs/NPs as the most impactful and desired sites, avoiding ecological damage.																				
F.	Accelerate: Increase the maximum number of schemes AONBs and NPs can accommodate by funding project management support on the partner's side	✓	✓	✗	✗	Dependent on number of schemes	More than 50km of targeted visual amenity schemes, selected by AONBs/NPs as the most impactful and desired sites, avoiding ecological damage.	<p>Rejected:</p> <p>Volumes of AONB undergrounding significantly beyond existing levels (e.g. a 3+ fold increase), without intervention, will not be practically deliverable as they do not have the project management capacity to be able to scope a significant increase in viable schemes and liaise with WPD throughout the planning and delivery of these. In addition, AONB and NP representatives tell us the total volume of overhead lines in AONBs and NPs is not a primary concern – their needs for undergrounding are in relation to small spans of line in key locations – e.g. significant beauty spots and viewpoints.</p> <p>In RIIO-ED1 as part of the commitment creation phase WPD offered a range of extremes up to as much as 60km per year, which was roundly rejected by stakeholders, including AONB/NP representatives as being out of proportion to the level of priority (medium) they placed on action in this area. With this wider context in mind, there is very little stakeholder appetite for WPD to unlock significantly greater than present day volumes of visual amenity undergrounding. Spending customers' money to therefore fund project management support on the side of AONBs/NPs does not appear to be an appropriate use of funds, is contrary to overall stakeholder and regulatory objectives to keep bills as low as possible, and would deliver an enhanced visual amenity benefit that no stakeholders have indicated they want in the last 10 years on engagement on this topic.</p>																			

	<p><u>Consideration of wider alternatives:</u> As key enablers to this overarching core commitment there are additional actions WPD has committed to deliver. WPD's co-creation events resulted in unprompted stakeholder suggestions in relation to improving visual amenity. These are all wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. These include:</p> <table border="1"> <tr> <th colspan="2">Topic: Visual impact of WPD's amenities / equipment</th></tr> <tr> <th>Stakeholder created actions</th><th>Included in WPD's Plan?</th></tr> <tr> <td>a) Consider visual impact of substations: keep them tidy</td><td>Yes - We will continue working with substation maintenance contract to ensure substations are well maintained, promote biodiversity whilst ensuring optimal operational functionality.</td></tr> <tr> <td>b) Maintain wild flowers and ecology around WPD infrastructure</td><td>Yes – We will work with local Wildlife Trusts to improve biodiversity on our owned land and at operational substation sites.</td></tr> </table>	Topic: Visual impact of WPD's amenities / equipment		Stakeholder created actions	Included in WPD's Plan?	a) Consider visual impact of substations: keep them tidy	Yes - We will continue working with substation maintenance contract to ensure substations are well maintained, promote biodiversity whilst ensuring optimal operational functionality.	b) Maintain wild flowers and ecology around WPD infrastructure	Yes – We will work with local Wildlife Trusts to improve biodiversity on our owned land and at operational substation sites.
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3. Costs are efficient and benefits of the actions plausibly outweigh the costs	<p><u>Efficiency of costs and cost benefit considerations:</u> A key signal of WPD's ongoing efficiency of spend in this area, is that if we were we to continue at present RIIO-ED1 levels in RIIO-ED2 and deliver 7km per year (option 1 offered to stakeholders), this would have resulted in a bill reduction. In addition, we were then able to offer a 16% increase from present levels (option 2: 40km in 5 years, or 8km per year) for no bill impact. This is all achieved by driving ongoing efficiency.</p> <p>Visual amenity expenditure is £6.6 million, this is 0.1% of the overall £6.7 billion Totex plan. We have not separately assessed visual amenity unit costs, due to its lack of materiality on our overall Totex delivery and expected scheme variations. Visual amenity unit costs in the RIIO-ED2 Business Plan are based on RIIO-ED1 unit costs delivered to date, rather than efficient asset replacement unit costs. We have to take this pragmatic approach to forecasting the cost, as costs can vary so much scheme to scheme, with a number of factors influencing the costs of each scheme including the stakeholder requirements, the required design and the landscape of the area. The RIIO-ED1 to date approach therefore recognises this mix of factors in the scheme costs and so therefore is the most sensible approach to adopt. The activity of visual amenity will be subject to the Ongoing Efficiency target that is applied in our plan to all Totex activities.</p> <p>An additional factor to demonstrate efficient cost delivery is WPD's geographically-based structure, where each scheme is designed and delivered by local staff who know the area best, which drives more efficient delivery solutions than a central design and delivery approach.</p> <p>Customers place significant value on the achievement of this outcome, with a mean value of £1.44 per customer, as revealed by WPD's willingness to pay research (see Supplementary Annex SA-05), which significantly outstrips the cost of delivery (circa 1p).</p>								
4. Customers, as well as stakeholders, support the Business Plan	<p>As Supplementary Annex SA-05 outlines, the majority of stakeholders actually wanted to see option 2: 40km underground. However as a sizeable number wanted us to go further amongst stakeholders, and a large majority 70% of surveyed customers wanted option 4, a commitment level of 50km was selected. Only 8% selected option 5 to go even further, indicating that stakeholders considered the options presented to be in the correct range and sufficiently ambitious.</p>								

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5. Customers are not exposed to unacceptable risks	<p>This will be treated as a reputational ODI within Ofgem's output framework and it will be measured and reported against annually.</p> <p>WPD has a proven track record of delivering against our stated commitments for undergrounding visual amenity schemes and spending our associated allowances. The level negotiated with stakeholders for our RIIO-ED2 commitment, while a 72% increase is therefore not a huge step change which would introduce risk of non-delivery. AONB and NP representatives are confident they can provide the volume of schemes stated.</p> <p>The total expenditure to fund this initiative (£7.2m in 5 years) is very small in the context of our total expenditure of £6.7 billion and therefore we do not consider a PCD to be appropriate due to the lack of materiality in the unlikely event of under delivery and any risk to customers as a result of under delivery being extremely small.</p>												
6. Assurance undertaken	<p>WPD's performance in this area will be presented and externally audited as part of the ISO14001 Environmental Management accreditation standard each year. Ofgem requires the annual publication of an environment report as part of the Environmental Action Plan to enable comparisons of delivery outcomes between DNOs. In addition, this commitment is in line the scope of the ESG rating and assessment that WPD will voluntarily undergo each year.</p>												

CATEGORY 2: MEETING THE NEEDS OF OUR CONSUMERS AND NETWORK USERS

Commitment 18: Smart energy action plans for vulnerable customers

Ensure customers are not left behind in the smart energy transition by offering at least 600,000 Priority Services Register customers a bespoke smart energy action plan each year.																							
Justification criteria:		WPD action:																					
Desired outcome - agreed with stakeholders (see Annex 5)		Customers most at risk of being left behind as part of the smart energy transition will be far more likely to participate and benefit from LCTs, smart meters, and flexible energy services (e.g. saving money through efficient use of energy) as a result of WPD's targeted advice and support.																					
1. Actions are appropriate for a DNO		<p>As a DNO, WPD is uniquely positioned to democratise access to smart energy by reaching out to Priority Services Register (PSR) customers. WPD's responsibilities are to operate, and connect all customers to, a smart network, ensuring nobody will be left behind and this is a key component of Ofgem's Business Plan guidance in relation to vulnerable customers. The smart energy action plans are directly focused on this goal. They will cover advice and support for vulnerable customers directly in relation to WPD delivered services, including access to flexibility services, LCT connections and community energy schemes.</p> <p>WPD owns and constantly seeks to improve relations with vulnerable customers. With access to PSR data and a responsibility to cleanse the PSR register once every two years (involving direct and effective contact with vulnerable customers), WPD can provide the action plans efficiently and effectively within its current customer touchpoints.</p> <p>The achievement of net zero will be underpinned by the decentralisation of energy resources and the universal adoption of LCTs, smart meters, and flexible energy services across DNOs. As a DNO, WPD is best positioned to lead this democratisation and roll out the transition to a smart energy plan for as many customers as possible.</p> <p>Vulnerable customers have previously encountered difficulties in adhering to smart energy plans (Ofgem Market Report). As a trusted party, known to be independent of providing products and commercial services, it is appropriate for WPD to be contacting vulnerable customers on this matter. These customers may need additional support. It is crucial that this support comes through an independent source, such as WPD.</p>																					
2. Considered alternative approaches (and options presented were sufficiently ambitious)		<p><u>Why did we offer these options / evidence of appropriate ambition:</u></p> <table border="1"> <tr> <td>Options considered:</td><td>Achieves outcome?</td><td>Technically feasible?</td><td>Cost effective?</td><td>Stakeholder support?</td><td>Cost</td><td>Benefit</td><td>Considerations and final decision:</td></tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>						Options considered:	Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?	Cost	Benefit	Considerations and final decision:								
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	A.	Minimum: No support	✗	✓	✓	✗	Zero	None. There will be no material impact on customer bills and a sustained risk of customers being left behind and WPD leaving this to other unspecified providers to address.	Rejected: Stakeholders have been adamant that they see a key role for WPD in supporting vulnerable customers through the smart energy transition. In 2018, as a result of our annual customer vulnerability conferences, stakeholders led us to update our Vulnerability Strategy to include a specific commitment in relation to supporting customers in a smart future and removing barriers to participation. Were we to take no action in this area we would fail to meet Ofgem's Business Plan guidance; therefore failing the Business Plan Incentive and the criteria set for DNO Customer Vulnerability strategies. It would also be contrary to WPD's values to not seek to deliver support to customers and place them at risk of suffering detriment, in particular relation to services that WPD provides and has control over the impact of. It was also mean WPD would be in contravention of the requirements of key external assurance audit's such as the British Standard for Inclusive Service Provision, which seeks to ensure fair and equal access for all customers to WPD's services.
	B.	Maximum: 1m customers offered a year offered support by phone (in line with biennial PSR data cleanse)	✓	✓	✗	✗	£10.8m	Every PSR customer offered smart energy advice and support once every 2 years.	Rejected: WPD's experience of delivering PSR data cleansing for the last six years shows us that offers of support by letter are significantly less successful than personalised contact by phone (c.20% vs 50% success rate). The requirement to phone every customer in relation to smart energy advice would lead to a very large Contact Centre headcount increase (an addition ten staff for each of the three shift cycles) to achieve enhanced levels of support for which stakeholders have consistently been clear they do not support or expect. Stakeholders have also been clear that we must target PSR customers with the most serious needs. Were we to contact every customer, including those on the register for reasons unrelated to financial hardship (e.g. being aged 60 or above; or having recently been discharged from hospital) we would be targeting PSR customers with less critical needs for whom the offer of a smart energy advice plan will be less relevant. This in turn would mean WPD was delivering a less efficient service and the cost benefit of using customer money to fund this initiative relative to the benefits achieved when targeting only those with the greatest need would reduce significantly.
	C.	High ambition: 600,000 a year offered by WPD (by phone)	✓	✓	✓	✓	£5m	600,000 PSR customers offered smart energy advice and support a year, targeting those with the greatest needs and most relevant vulnerabilities.	Offered: In order to drive the most efficient delivery method possible for this commitment, WPD can utilise the existing commitment (#22) to contact all PSR customers every two years to update their details and deliver advice, of which 60% (600,000 a year) will be achieved by direct telephone contact. By adding the offer of a smart energy action plan at this point of successful engagement with the customer, we stand to maximise the positive impact and customer buy-in while only extended the current call length by 5-10 minutes. Those with the greatest needs are targeted by phone call rather than letter, due to the large difference in success rates achieved, meaning that those receiving the offer of a smart action plan will be those that stand to benefit the most from this action.

	D.	Lower ambition: Less than 600,000 a year offered by WPD (by phone) - e.g. 300,000 a year	✓	✓	✓	Tested & rejected	£3.9m	Around 300,000 PSR customers offered smart energy advice and support a year, targeting those with the greatest needs and most relevant vulnerabilities, but with fewer customers supported than is possible and therefore diminished benefits compared to the more ambitious commitment option.	<p>WPD has led the industry in relation to our actions to cleanse our PSR and maintain high quality data. We conducted 4.5 million proactive calls to PSR customers in the first five years of RIIO-ED2, more than the rest of the industry achieved combined. We therefore understand that success rates of contact stand at around 60%, combining direct telephony outreach with letters and response forms sent to customers. Based on a commitment to contact every PSR customer every two years to update their details (1.9m in total on WPD's PSR), this results in 950,000 attempted contacts a year, of which around 570,000 (60%) are successful. This means that per year we are successfully establishing contact with 30% of registered customers.</p> <p>This knowledge and insight therefore shaped the setting of realistic targets for successfully contacting PSR customers in order to offer a new service of establishing a smart energy action plan. WPD proposes to utilise our existing PSR data cleanse processes to combine these activities in order to share costs and deliver this service as efficiently as possible. As the delivery of a smart energy action plan will be a far more involved process with each customer than simply updating their records, it was logical to assume that success rates may therefore be slightly lower than the 30% per year currently being achieved. As such we therefore proposed the following initial options for stakeholders to consider, including an option of very high ambition to achieve rates higher than our existing cleanse activity, and the opportunity to propose an entirely different alternative action in this area.</p> <table><tr><th></th><th>Option 1:</th><th>Option 2:</th><th>Option 3:</th><th>Option 4:</th><th>Option 5:</th></tr><tr><td>Ambition level:</td><td>Support 15% of the PSR per year</td><td>Support 20% of the PSR per year</td><td>Support 30% of the PSR per year</td><td>Support 40% of the PSR per year</td><td>Even further ambition / an alternative (uncapped)</td></tr><tr><td>Bill impact</td><td>-0.5p</td><td>No bill impact</td><td>+0.5p</td><td>+1p</td><td>-</td></tr></table>		Option 1:	Option 2:	Option 3:	Option 4:	Option 5:	Ambition level:	Support 15% of the PSR per year	Support 20% of the PSR per year	Support 30% of the PSR per year	Support 40% of the PSR per year	Even further ambition / an alternative (uncapped)	Bill impact	-0.5p	No bill impact	+0.5p	+1p	-
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	E.	Send letters only (up to 1m customers per year)	✗	✓	✓	✗	£1m	A high number of customers offered support, but not a point of engagement with WPD. Therefore unlikely to convert more than 15% to take up the offer a year (therefore likely to support only 115,000 customers a year).	<p>Rejected:</p> <p>Our experience of proactively contacting PSR customers to update their records and offer power cut resilience advice is that letters are significantly less successful than telephone calls. In addition, were the offer of a smart action plan to only be made via letter, despite elsewhere in our Business Plan making the commitment that we will speak directly to 600,000 PSR customers a year to update their records, we would be missing the opportunity to capitalise on successful engagement with each PSR customer to make this related offer of support.</p>																		

	F.	WPD signpost customers to external agencies only, no direct delivery of services by WPD	x	✓	✓	x	Minor reduction on costs associated with row C, due to shorter call duration	The offer of support is still made to customers, but customers themselves have to go to the effort of contacting external agencies for support with less hand-holding and support through this process.	Rejected: Our experience of delivering the industry's largest and most successful fuel poverty programme is that signposting customers to support services is highly ineffective and very few customers follow up on this advice. This relies on the customer making all of the effort, which offers poor customer satisfaction and in an area where customer understanding is already low, risks the customer abandoning the process. WPD would therefore achieve a headline of having offered support to customers, but the achievement of any successful outcomes and benefits for customers as a result of this offer would be highly questionable. For these reasons, stakeholders at our specialist vulnerability workshops roundly rejected the idea of signposting and blanket letter drops, as effective support in relation to the smart energy transition must be tailored and holistic.
	G.	WPD offer support initially, but smart action plans are all partner delivered	✓	✓	x	N/A	£42m	600,000 PSR customers offered smart energy advice and support a year, targeting those with the greatest needs and most relevant vulnerabilities and likely to receive a highly personalised and supported service.	Rejected: While this would undoubtedly lead to a highly targeted and personalised service for PSR customers, in order to achieve the volumes supported by customers (600,000 PSR customers a year) the cost of delivery would be incredibly high. Using our fuel poverty outreach services as a model, where the average cost per partner referral is c.£70, achieving this level of support across 600,000 customers would cost £42m a year. In doing so we would also be outsourcing advice and support for some services that are directly in WPD's control and for which we are the experts (e.g. flexibility services). Instead we concluded that the options outlined in row C were more appropriate, whereby WPD staff are upskilled to offer smart energy advice and action planning, we deliver this efficiently by utilising existing calls to PSR customers, and only those customers in need of the most involved and complex support will then be referred out to external partners as part of a managed referral process.
	H.	Inclusive service design from the outset in relation to WPD's DSO services	✓	✓	✓	✓	Zero	All WPD innovation projects and DSO services (e.g. flexibility products and services) will be assessed to ensure maximum inclusivity and wherever possible barriers to vulnerable customer participation are removed from each process.	Offered: While this core commitment focuses on smart energy action plans to help to overcome barriers to participation and to promote opportunities to share the benefits of the smart energy transition, stakeholder have been clear that WPD must seek to design smart services that are inclusive from the outset. As such we have made a wider commitment that we will develop a model to identify the capabilities of vulnerable customers to participate in a smart low carbon future. We will then use this (and this is a specified commitment in our DSO strategy and action plans) to maximise customer participation in new services, remove barriers to entry and encourage collaboration and best practice sharing with the wider industry to ensure vulnerable customers are not left behind by the smart energy transition.

I.	Hardship funds and smart energy grants					Dependent on number of customer supported. At c£2k a customer, support for 60% of WPD's PSR in RIIO-ED2 (1.2m customers) would cost £2.4bn	Installation of LCTs for some vulnerable customers. The number of benefitting customers would be very small unless funding was significantly greater than the £5m stated for row C.	<p>Rejected:</p> <p>In general WPD stakeholders have always been clear that they do not support direct grants to customers as often these provide short term fixes rather than long term solutions; instead they value the benefit of effective engagement with customers and the delivery of tailored services as a result. In relation to this core commitment, for the same volume of spent (£5m in five years), a grants of £2k to a PSR customer to fund the installation of a small PV roof-top array for example would result in support to only 500 customers a year versus the offer of support to 600,000 for which there are significant financial values (see section 3 below). Grants would therefore offer a one-size-fits all solution for a much smaller number of customers.</p> <p>Elsewhere in WPD's Business Plan we are proposing core commitments that will fund smart energy actions for customers but in a more impactful and cost efficient way. For example, we will fund PV installations at schools in highly deprived areas and work closely with them to not only lower their demand and energy bills but to explore how they can deliver community energy services when the school is not in use, including potentially providing cheaper power to vulnerable customers in the community. In addition, WPD's £1m annual Community Matters und will include funding for actions to support vulnerable customers and fund smart energy technologies for customers.</p>
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Consideration of wider alternatives:

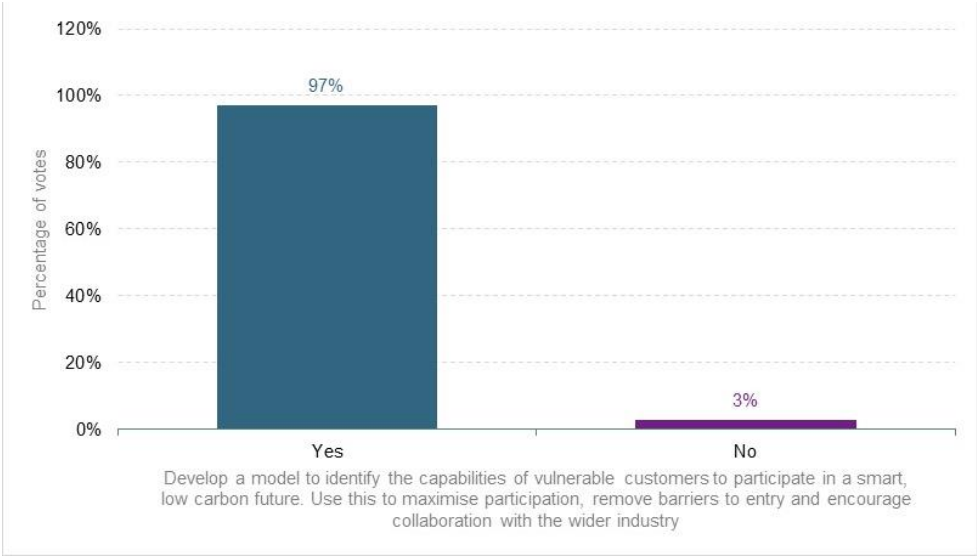
As key enablers to this overarching core commitment there are a number of ambitious new actions, as well as stretches to existing performance, that WPD has committed to deliver. WPD's co-creation events resulted in a large number of unprompted stakeholder suggestions in relation to this area. This commitment is therefore the result of a filtering process from an initial list of 27 alternatives that were co-created in the category of 'vulnerability and fuel poverty', and key requested output to 'Protect the interest of vulnerable customers in the switch to a smarter network'. Of the initial list 22 are included as wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. For example:

Topic: Protect the interest of vulnerable customers in the switch to a smarter network	
Stakeholder created actions:	Included in WPD's plan?
a) Make sure no one is left behind in the transition to a smart network, especially customers in vulnerable circumstances and in fuel poverty	Yes
b) Understand the barriers to participation, such as the complexity of the services and initiatives: address these through engagement with clear, advice and messaging	Yes
c) Influence suppliers to help promote cheaper tariffs, incentivising vulnerable customers to participate in new services	Yes
d) Work with landlords and social housing providers and tenants to identify opportunities for community energy schemes	Yes
e) Lobby Government for a policy that mandates protecting the interests of vulnerable customers in the transition to a low carbon, smarter network	Yes
f) Plan proactively for the impacts of climate change	Yes
g) Roll out smart networks	Yes
h) Education on energy usage / efficiency	Yes
i) Work with local authorities	Yes
j) Investigate the opportunities for peer-to-peer support to reduce system charges for fuel poor households	Yes
k) Consider alternative cheap fuels for those who rely on coal	No - confusion on WPD's role
l) Fund design, innovation and automation programmes that specifically target vulnerability	Yes
m) Push for the roll out of smart meters	No - confusion on WPD's role
n) Promote community EV schemes	Yes

In the Business Plan draft published in March 2021, one option considered was: "Develop a model to identify the capabilities of vulnerable

	<p>customers to participate in a smart, low carbon future and offer 60% of PSR customers specific support and education". Another option considered "Take a leading role in a coordinated approach with a range of industry participants (including funding for collaborations with community energy stakeholders) to share best practice and co-deliver schemes to ensure vulnerable customers are not left behind by the smart energy transition". Even though there was broad stakeholder support for both commitments in the previous Business Plan draft (97% and 99% respectively) and no notable alternatives were requested, WPD concluded that there was an underlying objective common to both commitments. For the July business plan, WPD decided to stretch the ambition and specify the following:</p> <ol style="list-style-type: none"> I. The model to identify capabilities of vulnerable customers to participate in a smart and low carbon future is now implied in the commitment as a necessary, enabling step. II. We increased our ambition from offering "specific support and education" to an explicit commitment to offer a smart energy plan tailored to each customer's needs. III. The commitment of taking a "leading role in a coordinated approach to share best practice and co-deliver schemes to ensure vulnerable customers are not left behind by the smart energy transition" was refined into a more targeted initiative. The "leading role in a coordinated approach" is implicit in the new commitment.
3. Costs are efficient and benefits of the actions plausibly outweigh the costs	<p>As set out in WPD's Customer Vulnerability strategy, the estimated cost to deliver this commitment is £1 million per year (£5 million total in RIIO-ED2). This has considered a number of synergies including utilising:</p> <ul style="list-style-type: none"> • The PSR cleansing process where a phone call is already established, • The experience of WPD customer advice teams, • The use of existing referral schemes with partnering organisations, which will enable a significantly more efficient offer to vulnerable customers while keeping costs low. <p>Through social value modelling, we estimate that this commitment will deliver estimated social benefits of £33.75 million, measured over a period of 10 years. These benefits consist of the estimated savings from smart meters (BEIS) and the potential savings from behavioural changes that our past programmes have delivered. Therefore, we can conclude that the cost for delivering this commitment is significantly lower than the cost that the consumer is willing to pay. The estimated social value also outweighs the cost of delivery.</p> <p>The benefits of this commitment – at a high level – consist of the financial savings achieved by the recipients (the PSR customers), and the carbon benefits of reduced consumption achieved via behaviour changes. The benefits case for the commitment is as follows:</p> <p><u>Offering smart energy action plans</u></p> <ul style="list-style-type: none"> • Cost <ol style="list-style-type: none"> i. There is a total cost of £1m per year, for a total of £5m over RIIO-ED2. • Financial benefit 1 (smart meters) <ol style="list-style-type: none"> i. Of the 600k contacted each year, WPD expects a proportion to be referred to an extended partner network that will provide advice and track outcomes through to completion. ii. It is expected that this proportion will start at 5% for the first 2 years of RIIO-ED2, rising to 10% for the remainder of the period as the network of partners develops. This expectation is built on tested data from WPD's past programmes including 'Power Up' and is linked to the time required to set up a network of trusted partners. iii. This translates to an estimate of 30,000 customers for the first two years, and 60,000 customers for years 3, 4 and 5. iv. Those that are referred to the partner network will be provided support and advice regarding smart meters, flexibility tariffs, LCTs and Local Community Energy schemes. v. To model expected benefits, it was assumed that most of the support would be given in the form of smart meter advice.

	<p>vi. Based on the average reduction in consumption due to a smart meter (2.8% based on BEIS review), and typical annual consumption values (2,900kWh – Ofgem), this provides a saving of £14 per customer per year.</p> <ul style="list-style-type: none"> • Financial benefit 2 (behavioural changes) <ul style="list-style-type: none"> i. A recent trial carried out by WPD (Power Up) included an intervention related to behavioural changes. In particular, it included advice on behavioural changes to improve the thermal comfort and living environment in the home, using the smart meter to help monitor changes in behaviour (such as control of mould and damp and to reduce household energy consumption where possible). ii. The trial reached out to 800 people, with 385 of them obtaining £32,736.50 in benefits related to behavioural changes. iii. If we assume that the reduction in consumption is already included in this figure (to ensure we aren't double counting), this results in £71.02 benefit per person. iv. To calculate the probability of success we consider the number of people that implemented the changes versus the number of people that received the advice – $385/800 = 48.1\%$. • Societal benefit <ul style="list-style-type: none"> i. If we take the same reduction in consumption due to smart meters (2.8%), and apply it to the average consumption (2,900 kWh), when using carbon prices and grid emission factors from Ofgem's Cost Benefit Analysis (CBA) template, we can forecast the tonnes of carbon removed. ii. This adds up to £1.9m in benefit (non-discounted) over the 10 years of RIIO-ED2 and RIIO-ED3. • Alternatives <ul style="list-style-type: none"> i. A less ambition option would have been to passively provide information (i.e. websites/leaflets etc.). While this may have delivered some of the associated benefit, from WPD's past experience, direct 1-1 interventions are the most effective for reaching hard-to-reach customers. ii. A more ambitious offer would have been to go beyond PSR customers, offering smart energy action plans to all who wanted one. This however would've been going beyond the remit of the DNO, whereas the current option is clearly targeted at "making sure no one is left behind" during the smart energy transition. • Specific rationale/stakeholder support <ul style="list-style-type: none"> i. WPD was urged to identify fuel poor customers, and better serve their needs in future smart grid planning. They want WPD to take steps to reduce fuel poverty, educate customers to increase awareness of our available support and support communities to address a lack of energy choice, help access to flexibility and LCTs. (Synth report 2) ii. Make sure no one is left behind in the transition to a smart network (Specific commitment suggestion – Synth report 2) iii. The initial measure (to develop a capability model only) was seen as acceptable but needs specific measures, such as how many customers are benefitting. (Synth report 3) iv. 97% of stakeholders supported the development of a model, and of the five options presented a strong majority of 47% supported the highest option to support 60% of PSR customers. (Synth report 4) <p>The proposed bespoke smart energy action plan will provide PSR customers with the following services:</p> <ul style="list-style-type: none"> • Customer access to domestic flexible and/or aggregated services: <ul style="list-style-type: none"> - Enabling customers to make direct savings on their energy bills by joining community-level flexibility tariffs where they can reduce their energy costs by adjusting the timing of their energy use. • Connection aid and advice for adoption of EVs and LCTs, potentially in collaboration with local authorities:
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	<ul style="list-style-type: none"> - Providing specialist advice and referrals to key partner agencies to provide vulnerable customers with the support required to navigate the process to make use of LCTs and EVs, accelerating the shift towards these technologies as a result of WPD's support. • Linking customers to relevant energy community schemes based on customer location: <ul style="list-style-type: none"> - Enabling customers to access lower cost energy produced locally via community energy schemes in their region. • Energy savings and energy efficiency measures: <ul style="list-style-type: none"> - Promoting a range of interventions to ensure customers are on the most appropriate energy tariff, supporting their applications to energy efficiency schemes and installation of smart meters - all intended to give our customers greater control over their energy use, resulting in direct savings. <p>In relation to unlocking the benefits of smart meters for some customers, this will be for customers that already have a smart meter installed or have made their own decision to request one. WPD will not actively encourage or discourage customers from doing so – we will simply work with those that do to maximise the benefits. The schemes we fund will deliver advice that will enable customers to adjust their behaviour as a result of better use of their smart meter and data. WPD does not have any charges associated with smart meters.</p>						
4. Customers, as well as stakeholders, support the Business Plan	<p>As Supplementary Annex SA-05 outlines, of the five options presented a clear majority of 42% of stakeholders wanted to see option 3: 30% of PSR customer per year. 75% of surveyed end user customers agreed. Only 6% of stakeholders selected option 5 to request an alternative approach, indicating that stakeholders considered the options presented to be in the correct range and sufficiently ambitious. In addition, a huge majority support the associated action for WPD to develop a capability tool to assess the opportunities for stakeholders to participate in a smart future in order to identify barriers that we must seek to remove when designing any new services in this area.</p>  <table border="1"> <caption>Survey Results: Support for developing a capability tool</caption> <thead> <tr> <th>Response</th> <th>Percentage of votes</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>97%</td> </tr> <tr> <td>No</td> <td>3%</td> </tr> </tbody> </table> <p>In addition, willingness to pay research reveals that the value placed by customers to increase the proportion of PSR customers who are provided with support each year in relation to low carbon, technologies, smart meters and flexible energy services amounts to £1.39 per customer, resulting in a total of £11.12 million per year (considerably above the costs of delivery of £1 million).</p>	Response	Percentage of votes	Yes	97%	No	3%
Response	Percentage of votes						
Yes	97%						
No	3%						

	75% of customers supported this initiative as part of WPD's acceptance testing.
5. Customers are not exposed to unacceptable risks	<p>If WPD under delivers against this commitment, we will incur reputational penalties as part of the ODI.</p> <p>This commitment is also submitted as a CVP due to the proposal's significant additional value above business as usual. If WPD is unable to deliver the value associated with the CVP, WPD will return any reward associated with delivery.</p> <p>WPD's customer advisers are trained to communicate with customers and are experienced in facing initial resistance to new ideas or proposals by the company, and have consistently cleansed PSR records by phone for several years. We have taken reasonable measures to ensure that we will deliver this commitment (including the training of customer advice teams, update of procedures, etc.)</p>
6. Assurance undertaken	WPD has a strong track record of external accreditations from independent experts who assess and endorse our vulnerability processes. These institutions and associated accreditations (including the British Standard Institute's (BSI) standard for inclusive service provision, the Customer Service Excellence Standard, Action on Hearing Loss' Louder Than Words accreditation and AbilityNet accessibility accreditation) provide guidance and advice that allow us to set strategic direction, assuring us that our targets are sufficiently ambitious based on extensive benchmarking across a range of sectors.

Commitment 19: Fuel poverty reduction

Support at least 113,000 fuel poor customers to save £60 million on their energy bills over RIIO-ED2.	
Justification criteria:	WPD action:
Desired outcome - agreed with stakeholders (see Annex 5)	Customers living in cold homes and/or struggling to afford their energy bills will receive tailored support to make long term changes to improve their ability to afford to heat their home.
1. Actions are appropriate for a DNO	<p>WPD has a statutory duty to protect customers in vulnerable situations and to maintain a PSR to drive bespoke for customers in relation to power cuts.</p> <p>Over the years, our vulnerable customer strategy has evolved from a focus solely on customers with permanent conditions to also include those in vulnerable situations that make them more likely to suffer in a power cut. Stakeholders tell that the causes are often interconnected, with non-financial impacts such as resilience and wellbeing during emergencies often hand-in-hand with financial impacts such as debt or fuel poverty. Our own delivery has also revealed this. When contacting customers to update their details on the PSR many also mention associated difficulties affording to heat their home. In response, WPD created an extensive programme of fuel poverty support schemes, which has seen us support over 92,000 customers to save more than £37 million on their energy bills since 2015. We have worked with expert stakeholders and delivery partners to devise an approach that ensures WPD doesn't go "too far" in the eyes of stakeholders and stray too far from our core remit as a DNO, but to address fuel poverty in an efficient but impactful way where it is a key factor also impacting our customers' ability to cope during a power cut.</p> <p>In 2017/18 we sought to more robustly evidence this correlation between fuel poverty and power cut resilience. We surveyed 77 vulnerable customer support agencies including charities, LAs and housing associations. We then took this a step further, working with the Centre for Sustainable Energy, as part of our new social indicator mapping we sought to identify customers that are both PSR eligible and fuel poor. The analysis combined Housing Survey datasets that contain indicators of fuel poverty, with additional data on household demographics (e.g. age, disabilities, etc.) and building features (e.g. stairlifts) that indicate likely PSR eligibility. The results revealed that of the total number eligible for the PSR, 10% are also fuel poor. However, crucially of the total customers in fuel poverty, a huge 43% are also eligible for the PSR. Their fuel poverty status would suggest that they are likely to experience additional vulnerabilities (e.g. harder to heat housing) that reduce their resilience to power cuts. This has significantly informed our strategy by revealing that targeting fuel poor households is a highly valuable approach to identify hard-to-reach vulnerable customers for the PSR.</p> <p>WPD has pioneered fuel poverty support in the sector, being rated as the number one company for our approach to vulnerable customer support for eight consecutive years as part of Ofgem's Stakeholder Engagement and Customer Vulnerability incentive. For RIIO-ED2 an effective approach to address fuel poverty is a specified baseline requirement of WPD's customer vulnerability strategy as part of the Business Plan Guidance.</p>

2. Considered alternative approaches (and options presented were sufficiently ambitious)		Why did we offer these options / evidence of appropriate ambition:						
Options considered:		Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?	Cost	Benefit	Considerations and final decision:
A.	No fuel poverty support	✗	✓	✓	✗	Zero	None – WPD would not provide any fuel poverty support to customers in vulnerable situations. Given annual spend is c.£1.5m, this would have an immaterial reduction (c.1p) on customer bills).	Rejected: This would be contrary to Ofgem’s guidance and baseline requirements of DNOs in relation to addressing fuel poverty as part of our vulnerable customer strategy. It would also go against consistent stakeholder feedback received over the last 10 years which values highly WPD’s programme of fuel poverty support. Despite already delivering an industry leading approach (around 4 times larger than any other DNO) stakeholders have been clear throughout the RIIO-ED2 process that they expect us to build on this and seek to go even further. Were we to remove all fuel poverty support it would also be against our company values to ensure that we protect vulnerable customers and seek to deliver continual improvements to our services. It would also curtail our ability to support customers in a smart energy future as many of the issues associated with fuel poverty including disengagement from the energy sector and issues with affordability will have a direct impact on the ability of customers to participate in future smart energy services.
B.	Blanket service: Blanket service for 70,000 customers (maintaining current RIIO-ED1 volumes of 14,000 customers supported a year)	✗	✓	✓	✗	£2.5m	£500k reduction in costs (immaterial impact on customer bills). Delivering some standardised support to help address causes of fuel poverty, but much reduced quality and scope of support from the bespoke, tailored programmes delivered in RIIO-ED1. Savings per customer supported likely to be around £50 per head – a 90% reduction from existing levels.	Rejected: Key to the success of WPD’s fuel poverty programme in RIIO-ED1 relative to other DNOs (our savings are around 10 times higher than the average amongst other DNOs) has been the delivery of tailored and holistic support for fuel poor customers. Stakeholders and expert delivery partners tell us that this is the only way to effectively tackle the root causes of fuel poverty and seek to permanently lift customers out of fuel poverty, rather than offer temporary fixes. WPD’s schemes all therefore cover nine key interventions ranging from income maximisation measures to energy tariff switching to energy efficiency installations. Were WPD to adopt a blank one-size-fix all we would risk only addressing a limited number of factors contributing to the issues facing customers, rendering it highly unlikely that the customer benefits will be enduring.
C.	Blanket service - increased: Blanket service to a larger number of customers e.g. 100,000-500,000	✗	✓	✓	✗	£5m	Delivering some standardised support to help address causes of fuel poverty, but much reduced quality and scope of support from the bespoke, tailored programmes delivered in RIIO-ED1. Savings per customer supported likely to be around £50 per head – a 90% reduction from existing levels. While greater volumes of customers may benefit, the savings will be significantly less and all will therefore be temporary fixes rather than permanent solutions to tackle the root causes of fuel poverty.	As a significant backward step from the quality of WPD’s industry leading services in RIIO-ED1, this option would see a significant 90% reduction in the average savings achieved per customer, while not achieving the desired outcome of achieving long term benefits for customers. By only tackling one or two of the most common issues facing customers (unlike our existing schemes that tackle nine interventions) we leave customers still at severe fuel poverty risk. WPD’s programme has always focused on 1-1 interventions, not only to increase the scale of the benefit, but to track test the value we are providing. Whereas a blanket approach may lead to “forecasted” benefits of ~£50 per head, it is impossible to assess how effective the materials actually are at scale. WPD’s tailored service on the other hand reports tested values, providing confidence that the target number of customers and target savings have been reached.

	D.	Holistic service - maintain: Holistic, tailored service for 75,000 customers (broadly in line with current RIIO-ED1 volumes of customers supported a year)	✓	✓	✓	Tested & rejected	£5m	Holistic, tailored fuel poverty support service, offering support in every conceivable intervention area. Resulting in £40m of savings direct to customers – over £500 per head achieved.	Offered: As WPD's fuel poverty programme is already delivering around ten times greater savings for customers than any other DNO in RIIO-ED1, maintaining this highly ambitious level of performance was a sensible point to start from when presenting options to stakeholders. We have consistently heard from stakeholders that they expect WPD to pursue continual improvement, but that WPD must maintain the high quality, tailored and holistic support provided for customers. We therefore proposed levels of enhanced performance that are still practically deliverable based on our experience of operating an extensive partnership model (over 70 partners are involved in our existing delivery). As with all optioneering with stakeholders, we gave a 5 th option for stakeholder to suggest an entirely different alternative or to request to go significantly further in our ambitions. In the case of fuel poverty our experience shows that there is a cap on the level of volume partners can deliver while still maintaining high quality and significant savings per head. While WPD can increase funding to enhance this, many charities have a ceiling on the number of staff and size of buildings etc that it would be difficult to expand beyond, regardless of the funding WPD can provide. These practicality considerations following extensive engagement with expert stakeholders at our customer vulnerability conferences therefore informed the selection of the options presented to stakeholders:																		
	E.	Holistic service - increase: Holistic, tailored service for 94,000 customers (broadly in line with current RIIO-ED1 volumes of customers supported a year)	✓	✓	✓	Tested & rejected	£7.5m	Holistic, tailored fuel poverty support service, offering support in every conceivable intervention area. Resulting in £50m of savings direct to customers – over £500 per head achieved.																			
	F.	Holistic service – significant increase: Holistic, tailored service for 113,000 customers	✓	✓	✓	✓	£10m	Holistic, tailored fuel poverty support service, offering support in every conceivable intervention area. Resulting in £60m of savings direct to customers – over £500 per head achieved.	<table><tr><td></td><td>Option 1:</td><td>Option 2:</td><td>Option 3:</td><td>Option 4:</td><td>Option 5:</td></tr><tr><td>Ambition level:</td><td>56,000 customers to save £30m</td><td>75,000 customers to save £40m</td><td>94,000 customers to save £50m</td><td>113,000 customers to save £60m</td><td>Even further ambition / an alternative (uncapped)</td></tr><tr><td>Bill impact:</td><td>-1.5p</td><td>No bill impact</td><td>+1.5p</td><td>+3p</td><td>-</td></tr></table>		Option 1:	Option 2:	Option 3:	Option 4:	Option 5:	Ambition level:	56,000 customers to save £30m	75,000 customers to save £40m	94,000 customers to save £50m	113,000 customers to save £60m	Even further ambition / an alternative (uncapped)	Bill impact:	-1.5p	No bill impact	+1.5p	+3p	-
	Option 1:	Option 2:	Option 3:	Option 4:	Option 5:																						
Ambition level:	56,000 customers to save £30m	75,000 customers to save £40m	94,000 customers to save £50m	113,000 customers to save £60m	Even further ambition / an alternative (uncapped)																						
Bill impact:	-1.5p	No bill impact	+1.5p	+3p	-																						
	G.	Holistic service – uncapped increase: Holistic, tailored service for more than 113,000 customers	✓	✓	✓	Tested & rejected	£10m plus an additional £5m per 20,000 customer supported (over 113,000 customers)	Holistic, tailored fuel poverty support service, offering support in every conceivable intervention area. Resulting in more than £60m of savings direct to customers – over £500 per head achieved.																			
	H.	Hardship funds (monetary grants to customers)	✗	✓	✓	Tested & rejected	Huge potential range	Customers receive one-off payments and grants towards in-home installations to help to address factors impacting fuel poverty. However without specialist and tailored advice this run this risk of being a temporary fix and one-off boost to finances without tackling the root causes of fuel poverty and resulting in long term benefits.	Offered and rejected: WPD put this forward to stakeholders as it was raised as part of the co-creation workshops held as part of the Business Plan development stage. However, it was rejected by wider stakeholders because it offers a temporary fix and therefore fails to achieve the desired outcome of achieving long term, enduring benefits for customers by tackling the root causes of fuel poverty. This option also delivers far less cost benefit for customers. In the case of row F, the cost per head is just £17, yet results in an average saving per customer of over £500. Were expenditure on a hardship fund to be at the same level of £2m a year (£10m in the 5 years of RIIO-ED2), if the average grant to customers was £100 this would result in 82% fewer customers supported (20,000 vs 113,000). In order to deliver the comparable savings per customers, and therefore delivering £500 to 113,000 customers, the cost of the hardship fund would need to be £56.5m.																		

	I.	<p>WPD's Customer Engagement Group asked us to show consideration of the following option:</p> <p>Alternative funding models (e.g. "pay as you save" / "no benefit, no fee") to recoup the costs from fuel poor customers over time from the savings they achieve</p>	x	✓	x	x	£0	<p>The benefits in terms of services received of each scheme would be as per rows D-G. However wider customers would not pay for this additional service. We would be asking the benefitting customers to pay for the service themselves via a portion of the savings they unlock as a result of the support. They would therefore be less financially well off as a result but it may enable support to be provided some additional customers above the maximum option offered (row G) at no additional cost to wider customers.</p>	<p>Rejected:</p> <p>Wider customers have been very clear that they place significant value on WPD delivering a programme of fuel poverty support funded by wider customers. Action to alleviate fuel poverty was the second highest valued initiative within WPD's willingness to pay research, with extremely strong support that wider customers should contribute and pay to support the most vulnerable in society. By contrast this model would make fuel poor customers themselves pay a portion of the savings they achieve, in order to fund the outreach in the first place. This notion was rejected for a number of reasons:</p> <p>Firstly, we are not comfortable morally with asking the poorest customers only to fund their own support, when there is overwhelming evidence that wider customers believe they should be funding this service.</p> <p>Secondly, the financial savings achieved by many customers do not result in a circa £500 saving direct into their bank balance; often it enables them to live warmer and happier, which are hugely important and valuable outcomes. For very many customers the savings enable them to better afford their required energy – therefore having the heating on for longer and/or heating multiple rooms in the home. If we were to ask customers to provide the c.£100 funding from these savings in order to fund the support in the first place, for many customers this would curtail their ability to heat their homes to the required standard, therefore meaning we have not achieved the maximum benefit for each customer, which is a stated aim of our schemes.</p> <p>Thirdly, the limits on the options presented above are not a result of a cap on funding – unlimited funding would not result in exponential numbers of customer supported, as there is a limit to what partners can pragmatically deliver at the required quality. There are a finite number of appropriately resourced and skilled partner organisation in our region, who can deliver the appropriate quality of support that would be holistic and result in the types of intervention required to unlock savings greater than £500 per customer (as per our existing schemes).</p> <p>Finally, we have worked extensively with expert stakeholders in this area for years, including hosting customer vulnerability conferences for the last five years. At the events we discuss opportunities for innovation and new business models, for which this model has never been proposed due to its unworkability. Moreover, our knowledge gained from our partnerships with these expert stakeholders is that trust in organisations amongst fuel poor consumers is extremely low and they have very little upfront capital. Therefore any scheme that would require them to commit to sacrifice a portion of the eventual benefits would significantly reduce the likelihood of them being willing to engage in a support programme in the first place.</p>
<p><u>Consideration of wider alternatives:</u></p> <p>As key enablers to this overarching core commitment there are a number of ambitious new actions, as well as stretches to existing performance, that WPD has committed to deliver. WPD's co-creation events resulted in a large number of unprompted stakeholder suggestions in relation to this area. Of these, the vast majority are wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. For example:</p>									
Topic: Partnerships and outreach services									

Stakeholder created actions		Included in WPD's Plan?
a)	Develop and continue to expand partnerships with carers and charities such as Citizens Advice	Yes
b)	Identify partnership leaders and community champions to support vulnerable customers and protect them from scams	Yes
c)	Work closely with key stakeholders and partners to provide education and support for customers in fuel poverty	Yes
d)	Include community energy groups in your partnership and outreach services	Yes
e)	Engage with all tiers of Government as well as housing associations to raise awareness of initiatives, including those aimed at alleviating fuel poverty	Yes
f)	Promote the PSR and work to make every contact count	Yes
g)	Coordinate your channels of communication with your partners and share resources, data and expertise.	Yes
h)	Help scale-up retrofitting projects	Yes
i)	Use your partners to educate fuel poor customers on financial management and support them to switch tariffs	Yes
j)	Consider whether it is appropriate to work with food banks	Yes
k)	Focus on providing outreach services in mental health	Yes
l)	Work closely with suppliers to reduce fuel poverty	Yes
m)	Work with the private rented sector to tackle fuel poverty	No
n)	Join the Public Services Boards	No
o)	Engage with resilience forums and use mapping tools	Yes
p)	Work with LAs and parish councils	Yes
q)	Review the way you budget and fund initiatives	Yes
r)	Maintain the services you offer	Yes
s)	Focus on cross-referencing: build services in tandem with building network operation	Yes
t)	Work on signposting to identify vulnerable and fuel poor customers	Yes
u)	Collaborate with other DNOs and suppliers on disconnections	No
v)	Distinguish between crisis and day-to-day support	Yes
w)	Tie this work into your Social Contract	Yes
x)	Use WPD brand as a trusted partner	Yes
Topic: Referral networks, data sharing and data quality		
Stakeholder created actions		Included in WPD's Plan?
a)	Lobby Ofgem to allow for data to enable data to be safely shared with other utilities	Yes
b)	Provide funding and increase the support you give to referral networks	Yes
c)	Encourage more data sharing with referral networks including LAs and healthcare providers	Yes
d)	Build trust with customers to gain more access to smart meter data	No
e)	Connect customers to the support they need	Yes
f)	Make it easier for customers to sign up to the PSR	Yes
g)	Work with suppliers	Yes
h)	Use EPC data in social indicator mapping	Yes
i)	Sign up to the JIGSO project	No
j)	Go to grassroots level and work with parish councils	Yes
k)	Use team managers dedicated to this	Yes – establishment of customer vulnerability champions
l)	Work with Auriga	Yes
m)	Collaborate with the Department of Work and Pensions	Yes
n)	Monitor who is accessing vulnerability services to improve data quality	Yes
o)	Use existing data in a smarter way	Yes
Topic: Identify fuel poverty		
Stakeholder created actions		Included in WPD's Plan?
a)	Use 'social indicator mapping' to identify areas of fuel poverty	Yes

	b) Target those on pay-as-you-go meters to receive support	Yes
	c) Target those with other key indicators of fuel poverty, such as those off gas, using solid fuels for heating, or those with single glazing	Yes
	d) Work with suppliers	Yes
	e) Use a clear definition of fuel poverty - be aware that there is a difference between 'can't pay' and 'won't pay'	Yes
	f) Create a PSR for fuel poor customers	No
	g) Set targets for funding fuel poor initiatives	Yes
	h) Work with partner organisations on identifying fuel poverty	Yes
3. Costs are efficient and benefits of the actions plausibly outweigh the costs	<p>The cost per referral for WPD's fuel poverty programme have decreased year-on-year throughout RIIO-ED1, and the savings per head have increased significantly – indicating that WPD has a highly efficient delivery model. The cost per head will be just £17 in RIIO-ED2, yet result in an average direct saving per customer of over £500.</p> <p>In addition there are considerable wider social values to the outcomes WPD's actions in this area will deliver. The benefits case for the commitment is therefore as follows:</p> <p><u>Support 113,000 fuel poor customers to save £60m in their energy bills over RIIO-ED2</u></p> <ul style="list-style-type: none"> • Cost <ul style="list-style-type: none"> i. The estimated cost to deliver this commitment is £10m. These costs support the expansion of WPD's External Affairs team and include: <ul style="list-style-type: none"> 0. Fuel poverty outreach schemes. 1. Social indicator mapping. 2. Annual vulnerability stakeholder workshops. 3. Smart energy outreach trials for vulnerable customers. ii. Our experience in RIIO-ED1 provided WPD with lessons learned and we can now identify resource needs with more certainty. • Financial benefits <ul style="list-style-type: none"> i. In 2019/2020, WPD's fuel poverty programme delivered £10.7m in financial savings across 18,652 fuel poor customers. This equates to an average benefit of £537.67 per customer in 19/20, which we have taken as a representative year (20/21 was impacted by Covid-19, and therefore less typical). ii. By reaching the targeted number of customers, WPD will deliver a financial benefit of ~£64m over RIIO-ED2 (non discounted). • Societal benefits <ul style="list-style-type: none"> i. In addition to the financial benefits the customers receive, it is also possible to measure the impact on quality of life – namely the benefit of preventing customers from developing asthma and other respiratory diseases from living in cold/damp dwellings. ii. A Quality of Life Year (QALY) is valued at £60,000 per year, with 0.046 (i.e. £2,760 - NHS) related to morbidity. iii. By understanding the chance of developing respiratory issues due to residing in damp or mouldy dwellings (2.6% increase – European Parliament), and the likelihood of a customer acting on the advice provided (64% - Warmer & Greener Forum), we can forecast that this advice will result in 4.18% fewer cases among the customers WPD supports. iv. This delivers a total benefit of ~£13m over RIIO-ED2 (non discounted). <p>Therefore, we can conclude that the estimated social value of delivering this commitment is much higher than the estimated costs, delivering a Net Present Value (all benefits, minus all costs) of £59.2m over RIIO-ED2).</p>	

	<p>In addition, our customer research reveals that customers place considerable social value on the outcomes WPD will deliver in this core commitment. Our willingness to pay research reveals that the value placed by customers on the achievement of this target level of performance is £3.67 (the highest value attributed to any of WPD’s Business Plan commitments), which significantly outstrips the costs of delivery (2-3p per customer).</p>																		
4. Customers, as well as stakeholders, support the Business Plan	<p>As outlined in Annex 5, this core commitment has very high levels of stakeholder support. In our preliminary stage engagement, stakeholders had asked us to go further in our levels of fuel poverty support, but not to go too far (particularly the view of major users and business customers) and risk duplicating the services of other agencies. Most importantly stakeholders stressed a duty to keep WPD’s overall bills as low as possible and therefore to seek to do more but without increasing our charges significantly.</p> <p>As part of the Business Plan consultation, our stakeholders were asked what level of support we should provide for fuel poor customers. In the first five years of RIIO-ED1 (therefore a comparable time period to the upcoming five year price control review for RIIO-ED2), and at the time of our first draft Business Plan consultation, we had delivered support to 70,000 customers, directly saving them £27 million.</p> <p>In our first draft RIIO-ED2 Business Plan, we therefore proposed supporting 75,000 customers to save £40 million which was a significant improvement on WPD’s current performance, which significantly surpasses performance by others in the sector (using the information publicly available, for RIIO-ED1 to date, the average savings amongst other DNOs for fuel poor customers was £1.6 million per annum). In the consultation, we therefore gave our customers five choices, including options to go further than our initially proposed level. The results are shown below.</p> <div><table><thead><tr><th>Option</th><th>Description</th><th>Percentage of vote</th></tr></thead><tbody><tr><td>1</td><td>56,000 customers to save £30m (-1.5p on annual bill)</td><td>8%</td></tr><tr><td>2</td><td>75,000 customers to save £40m (bill as today)</td><td>27%</td></tr><tr><td>3</td><td>94,000 customers to save £50m (+1.5p on annual bill)</td><td>20%</td></tr><tr><td>4</td><td>113,000 customers to save £60m (+3p on annual bill)</td><td>42%</td></tr><tr><td>5</td><td>I would prefer to suggest an alternative (discussion session upcoming)</td><td>3%</td></tr></tbody></table></div>	Option	Description	Percentage of vote	1	56,000 customers to save £30m (-1.5p on annual bill)	8%	2	75,000 customers to save £40m (bill as today)	27%	3	94,000 customers to save £50m (+1.5p on annual bill)	20%	4	113,000 customers to save £60m (+3p on annual bill)	42%	5	I would prefer to suggest an alternative (discussion session upcoming)	3%
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	<p>Of the five options, the option to support 113,000 customers to save £60m was voted by 42% of our stakeholders. 75% of our end user customers also agreed. The fact that only 3% of stakeholders supported option 5 strongly indicates that stakeholders considered the options presented to be in the correct range and sufficiently ambitious.</p> <p>In addition, 82% of customers supported this initiative as part of WPD's acceptance testing.</p>
5. Customers are not exposed to unacceptable risks	<p>WPD's performance in relation to customer vulnerability will be subject to a financial ODI, which means that significant under delivery against the targets set for this commitment could result in financial penalties being imposed.</p> <p>In addition, with such a huge cost benefit per supported customer of over £483, even a modest under delivery against the overall target would still deliver significant benefits to all customers supported.</p>
6. Assurance undertaken	<p>WPD has a strong track record of external accreditations from independent experts who assess and endorse our vulnerability processes. These institutions and associated accreditations (including the BSI standard for inclusive service provision, the Customer Service Excellence Standard, Action on Hearing Loss' Louder Than Words accreditation and AbilityNet accessibility accreditation) provide guidance and advice that allow us to set strategic direction, assuring us that our targets are sufficiently ambitious based on extensive benchmarking across a range of sectors.</p> <p>Our fuel poverty schemes work in a 'hub' model to deliver comprehensive support, with an appointed 'lead partner agency' in each of our four licence areas that assesses the individual needs of each customer. After identifying their bespoke requirements, the lead agency works with a pool of sub-partner agencies with specific expertise across the range of factors impacting fuel poverty. Everything is coordinated through the lead agency to avoid hand-offs and confusion for customers. Stakeholders have made it clear that WPD should continue to use this partnership hub model to deliver our customer outreach schemes.</p> <p>The volume and experience of our various partners (examples below), provides assurance that we've taken into account all available best practice.</p> <ul style="list-style-type: none"> • In 2018/19, we launched a pilot 'Power Up Health' scheme, partnering with local health services and support groups to reach fuel poor patients who were previously unknown to WPD's PSR. We have worked with the lead agency, Nottingham Energy Partnership (NEP), to proactively expand the scheme beyond the initial scope of supporting customers referred by their oxygen provider, Air Liquide, after receiving breathing apparatus. 'Power Up Health' has collaborated closely with Derby and Burton Community Hospital Respiratory Unit to improve health support to fuel poor customers in WPD's PSR. We worked with Hub Leads such as Auriga Services, Coventry Citizens Advice, Energy Saving Trust and Centre for Sustainable Energy; • Benefitting from the same hub model, in the Programme "Affordable Warmth" we work with a trusted, lead agency in each of our four licence areas providing comprehensive support from a diverse range of agencies, all via a one stop shop service. The hub leads included Nottingham Energy Partnership, Marches Energy Agency, Care and Repair Cardiff and Plymouth Energy Community; • Our initiatives to reduce stress and anxiety around energy included partnerships with a range of health services all under hubs managed by six lead organisations: ACE, Act on Energy, Birmingham Disability Resource Centre, Exeter Community Energy, North Warwickshire Citizens Advice and South Hams Citizens Advice.

Commitment 26: Customer satisfaction

Deliver exceptional service levels by achieving an overall average customer satisfaction of 93% or higher by the end of RIIO-ED2, with separate reporting for emerging technology customers.																															
Justification criteria:	WPD action:																														
Desired outcome - agreed with stakeholders (see Annex 5)	Deliver exceptional service and therefore excellent levels of customer satisfaction across all service areas, including in particular power cuts, connections and general enquiries, with improvements over time (and absolutely no regression). WPD will develop a more inclusive digitalised approach to customer satisfaction measurement over the course of RIIO-ED2, championing the inclusion of these channels in Ofgem's official surveys and demonstrating how this can be done by including them in all WPD's own commissioned surveys.																														
1. Actions are appropriate for a DNO	The Broad Measure of Customer Satisfaction (BMCS) is an Ofgem ODI, measuring the quality of WPD's service delivery across key activities (power cuts (planned and unplanned), connections (quotations and completed works) and general enquiries). In addition, WPD will also commission additional, independent surveys to measure performance in other key service areas including major connections, distributed generation connections, PSR advice services, fuel poverty support, flexibility services and access to open data. These are critical research actions to a) give customers confidence in, and objective assurance of, the quality of WPD's service deliver, and; b) identify ongoing improvements to WPD's services and continually refresh our understanding of customer expectations. These are therefore critical actions for WPD to undertake.																														
2. Considered alternative approaches (and options presented were sufficiently ambitious)	<p>Why did we offer these options / evidence of appropriate ambition:</p> <table border="1"> <thead> <tr> <th>Options considered:</th><th>Achieves outcome?</th><th>Technically feasible?</th><th>Cost effective?</th><th>Stakeholder support?</th><th>Cost</th><th>Benefit</th><th>Considerations and final decision:</th></tr> </thead> <tbody> <tr> <td>A. <i>Regression: Worse than RIIO-ED1</i> (e.g. <90%)</td><td>✗</td><td>✓</td><td>✓</td><td>✗</td><td>Marginal cost reduction (e.g. fewer Contact Centre headcount)</td><td>Detrimental to customer service. Benefit of marginally lower bills, but against an area of service customers significantly value.</td><td>Rejected: Stakeholders have been adamant that they will not entertain a reduction in performance, the cost benefit of doing so would be minimal, and it would also be contrary to WPD's values to not seek continual improvement and consistent delivery of excellent customer service levels, particularly as people's reliance on energy increases significantly in light of a smart energy future.</td></tr> <tr> <td>B. <i>Maintain: Performance in line with RIIO-ED1</i> (90% = 6 year average; 92% in 2020/21)</td><td>✓</td><td>✓</td><td>✓</td><td>✗</td><td>None</td><td>Maintained service level but some risk associated with lack of continual improvement as new services emerge.</td><td>Offered (but rejected by stakeholders): This was offered to stakeholders. It is feasible to just target maintaining current service levels, but this carries risk. As new services emerge in RIIO-ED2 and customer expectations continue to increase as a result of the shift to a more electricity-dependent future (e.g. expansion in EVs) this will likely require WPD to "run to stand still". As such, targeting to continually improve will ensure we pursue innovative approaches at all times and keep pace with changing customer expectations.</td></tr> </tbody> </table>							Options considered:	Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?	Cost	Benefit	Considerations and final decision:	A. <i>Regression: Worse than RIIO-ED1</i> (e.g. <90%)	✗	✓	✓	✗	Marginal cost reduction (e.g. fewer Contact Centre headcount)	Detrimental to customer service. Benefit of marginally lower bills, but against an area of service customers significantly value.	Rejected: Stakeholders have been adamant that they will not entertain a reduction in performance, the cost benefit of doing so would be minimal, and it would also be contrary to WPD's values to not seek continual improvement and consistent delivery of excellent customer service levels, particularly as people's reliance on energy increases significantly in light of a smart energy future.	B. <i>Maintain: Performance in line with RIIO-ED1</i> (90% = 6 year average; 92% in 2020/21)	✓	✓	✓	✗	None	Maintained service level but some risk associated with lack of continual improvement as new services emerge.	Offered (but rejected by stakeholders): This was offered to stakeholders. It is feasible to just target maintaining current service levels, but this carries risk. As new services emerge in RIIO-ED2 and customer expectations continue to increase as a result of the shift to a more electricity-dependent future (e.g. expansion in EVs) this will likely require WPD to "run to stand still". As such, targeting to continually improve will ensure we pursue innovative approaches at all times and keep pace with changing customer expectations.
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	C.	Incremental improvements: RIIO-ED1 performance plus 1%	✓	✓	✓	✓	No additional bill impact	Continual improvement above already exceptional, industry leading satisfaction levels achieved in RIIO-ED1.	Offered: Incremental improvements up to around a maximum of 95% are deemed realistic. Analysis of the BMCS reveals that the current area of lowest satisfaction is 'connections' and specifically aspects of service that would benefit from greater hand-holding, ownership and proactive information (e.g. ease of process, understanding charges, complexity of information etc). We are therefore confident that an increase of 2-3% on top of current RIIO-ED1 performance is possible as a result of employing a number of dedicated connections staff in each regional depot to provide this hand-holding and key account management for customers. From the outset of our engagement, stakeholders have consistently expressed the view that WPD's current customer satisfaction performance is excellent (see Supplementary Annex SA-05, pg 89). Stakeholders have expressed the view that beyond a very high threshold of 90%, they see little distinction or merit between the improvements levels possible beyond this. The consensus has therefore been that while there should be absolutely no regression, even in exchange for a reduction in customer bills, any further improvement should be incremental. This feedback therefore drove the selection of incremental performance options that were uncapped, for stakeholders to consider as part of our consultation process. They were: <table><tr><th>Option 1:</th><th>Option 2:</th><th>Option 3:</th><th>Option 4:</th><th>Option 5:</th></tr><tr><td>Maintain current baseline (original: 89%; Updated: 92%)</td><td>1% improvement</td><td>2% improvement</td><td>3% improvement</td><td>Even further ambition / an alternative (uncapped)</td></tr><tr><td>Bill reduction</td><td>No bill impact</td><td>+24p</td><td>+48p</td><td>(+24p per 1% improvement from option 2)</td></tr></table> As set out in Annex 5, the majority of stakeholders voted for option 2. The lack of support for options above this, including just 5% support for option 5 strongly indicates that stakeholders considered the options presented to be in the correct range and sufficiently ambitious. As reviewed by the Research Subgroup of the Customer Engagement Group, in all stakeholder research on this topic, including deliberative focus groups and stated preference surveys, respondents were given key context about WPD's existing performance relative to other performers in the sector. In relation to the aspirational performance targets set by DNOs in their Business Plans published in July 2021, some of which surpassed WPD's initial target, we have since sought to provide relevant context with customers as part of acceptability research in October 2021 to test whether the knowledge that others are targeting levels around 1% higher than WPD influences the scale of stakeholder aspiration in relation to this commitment.	Option 1:	Option 2:	Option 3:	Option 4:	Option 5:	Maintain current baseline (original: 89%; Updated: 92%)	1% improvement	2% improvement	3% improvement	Even further ambition / an alternative (uncapped)	Bill reduction	No bill impact	+24p	+48p	(+24p per 1% improvement from option 2)
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	D.	Incremental improvements: RIIO-ED1 performance plus 2%	✓	✓	✓	Tested & rejected	£43m	Continual improvement above already exceptional, industry leading satisfaction levels achieved in RIIO-ED1.																
	E.	Incremental improvements: RIIO-ED1 performance plus 3%	✓	✓	✓	Tested & rejected	£86m	Continual improvement above already exceptional, industry leading satisfaction levels achieved in RIIO-ED1.																
	F.	Dramatic improvements: RIIO-ED1 performance plus 4% or higher (resulting in 95%+ satisfaction)	✓	✓	✗	✗	£129m plus	Continual improvement above already exceptional, industry leading satisfaction levels achieved in RIIO-ED1.	Offered (but rejected by stakeholders): In addition, the introduction of specialist staff in each regional depot to support our connections process will have a diminishing impact beyond the level of 95%. Experience shows that some customers will never award a 10/10, and therefore attainment about 95% on a consistent basis is questionable over whether it is possible. Stakeholders have never indicated they expect service of this level and have been clear that 90%+ is deemed exceptional. The costs to pursue 95%+ will also increase significantly as it will require fundamental system and process changes in the pursuit of a 1-2% improvement, which does not appear proportionate.															

	G. Entirely new measures (e.g. customer experience)					Additional costs to all listed above (as these are part of industry measure)	No realistic benefit in addition to the measures listed above, given already exceptional customer service levels.	Rejected: The existing BMCS is a customer experience measure. There are 30 breakdown questions posed about all aspects of the customer experience, ranging from staff politeness, to speed of response to clarity of information to ease of processes. In addition, WPD commissions additional top-up surveys to the Ofgem measures, including experience research with major connections customers, distributed generation customers, PSR customers and all those supported by a WPD fuel poverty scheme. Introducing a separate measure from the Ofgem BMCS model is therefore unlikely to change the overall experience received by our customers, which is already at exceptional levels. The need for an entirely different approach would be more relevant for a company whose satisfaction is low with significant improvements still to be made. Furthermore, the BMCS is an Ofgem-set, industry-wide mechanism that has driven huge uplifts in customer experience across the sector during RIIO-ED1. There is therefore no evidence of what benefit introducing a new customer experience measure would bring over and above the existing approach, stakeholders have not suggested this as change they want to see and benchmarking with the Customer Service Excellence Standard and Institute of Customer Service reveals that WPD's approach is in line with UK-wide best practice.																																		
<u>Consideration of wider alternatives:</u> As key enablers to this overarching core commitment there are a number of ambitious new actions, as well as stretches to existing performance, that WPD has committed to deliver. WPD's co-creation events resulted in a large number of unprompted stakeholder suggestions in relation to this area. Of these, the vast majority are wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. For example:																																										
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	<p>In addition, WPD's own expertise/knowledge, coupled with engagement with expert and specialist stakeholders, led to the identification of additional innovations in customer service that wider stakeholders may not have spontaneously considered. We will deliver these as key improvements to drive the achievement of this core commitment. For example, in relation to innovation and digitalisation we anticipate we will:</p> <ul style="list-style-type: none"> • Introduce entirely new customer interface channels such as same day connections self-quotation tools for high volume work types (e.g. LCT connections). • Refine our proactive texting service within minutes of a fault occurring. • Ensure the same up to date information is available across all our communication platforms, telephony and digital, in real-time. • Make better use of technology to improve information flow from site to office to customer. • Improve the accuracy of restoration times and explanations of fault causes. • Improve our planned interruption notification process, providing visibility on digital channels. • Expand the volume and speed of proactive customer calls during and post fault. • The ultimate measure of the impact of these actions, and whether we are sufficiently keeping pace with (and exceeding) customer expectations, will be the customer satisfaction measure outlined in this core commitment.
3. Costs are efficient and benefits of the actions plausibly outweigh the costs	<p>WPD is proposing no increase to baseline funding from RIIO-ED1 to achieve this enhanced performance target, despite the significant expansion of services it entails. These will therefore be achieved through ongoing efficiencies and improvements. In a further measure of the efficiency of our delivery, while there is a growth in the work programme and expansion of our satisfaction measures and associated actions to achieve this, both the closely associated costs for this area and staff levels to achieve it, will remain flat.</p> <p>Our customer value research has been used as a prioritisation tool to calibrate the scale and scope of the options offered to stakeholders in this area. Our willingness to pay research reveals that the value placed by customers on the achievement of a target for customer service 1-2% higher than our RIIO-ED1 baseline (at £1.01) significantly outstrips the costs of delivery (24p per 1% improvement).</p>
4. Customers, as well as stakeholders, support the Business Plan	<p>In addition to the high levels of stakeholder support for this commitment as outlined in Annex 5, 86% of customers supported this initiative as part of WPD's acceptance testing.</p> <p>At workshops in September 2021, where WPD returned to stakeholders to test this commitment in light of updated baseline performance 64% favoured the option of a 1% improvement on present day service levels. 29% wanted to see us go a little further than this (e.g. 2% above existing levels) but 0% asked for performance to improve beyond this. Further customer research is underway in October 2021 that will provide the context to customers that WPD's updated target will be 1% below the top target in our sector, to help us understand if customers are happy with a 93% level of satisfaction even if this will not be industry leading by a small margin.</p>
5. Customers are not exposed to unacceptable risks	<p>If WPD under delivers against this commitment, we will incur financial penalties as part of the ODI.</p>
6. Assurance undertaken	<p>WPD's performance in this area has been benchmarked, and the robustness and efficacy of our initiatives to improve customer service have been independently assessed as part of the Customer Service Excellence Standard, in which WPD is the top performing company in the UK across all sectors, and British Standard for Inclusive Service Provision.</p>

CATEGORY 3: MAINTAINING A SAFE AND RESILIENT NETWORK

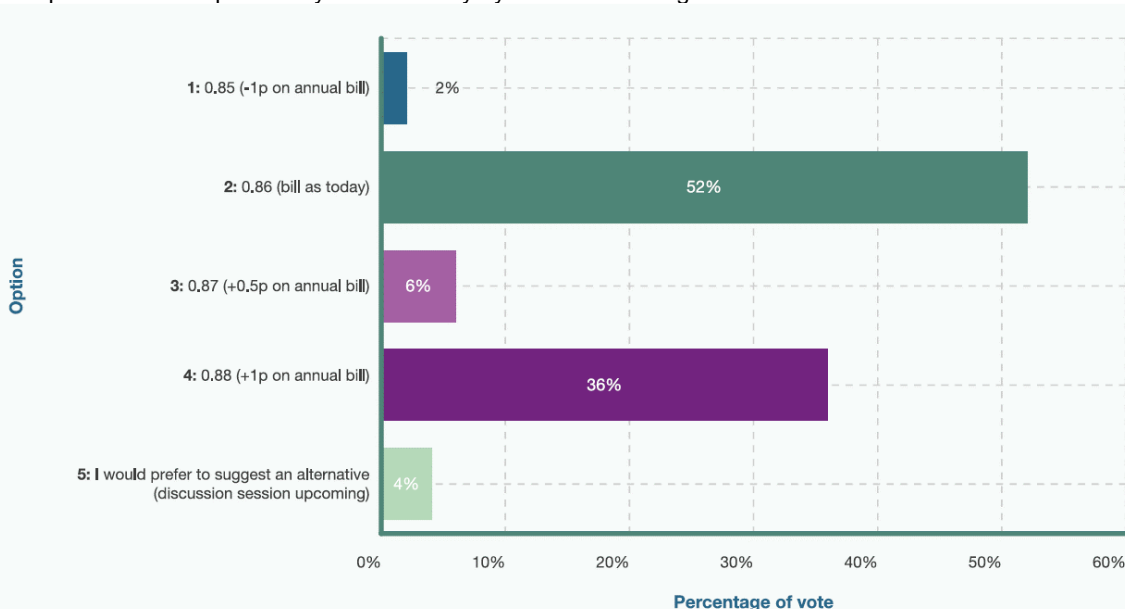
Commitment 33: Power cuts

Deliver improved network reliability where on average power cuts are better than one interruption every two years lasting less than 22 minutes (12% reduction in customer interruptions (frequency) and 16% reduction in customer minutes lost (duration)), utilising vulnerable customer data to prioritise network improvement schemes.								
Justification criteria:		WPD action:						
Desired outcome - agreed with stakeholders (see Annex 5)		Customers receive a highly reliable supply of electricity, delivering our lowest ever power cut levels (with an average duration of less than 22 minutes per year.)						
1. Actions are appropriate for a DNO		This commitment addresses the fundamental purpose of WPD's role as DNO to provide a safe and secure supply of energy for our customers.						
2. Considered alternative approaches (and options presented were sufficiently ambitious)		Why did we offer these options / evidence of appropriate ambition:						
Options considered:		Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?	Cost	Benefit	Considerations and final decision:
A.	Regression: Worse performance than in RIIO-ED1	x	✓	✓	x	Same as for row C below. Were WPD to scale back on certain activities that have historically driven improvements in network performance (e.g. we could reduce our tree maintenance programme), the cost saving from doing so would largely be offset by increases in fault response costs which would be reasonably expected to increase as a result of these proactive works being scaled back.	Worsened service and no guarantee of lower bills (e.g. savings via less maintenance offset against increased fault response call outs).	Rejected: Stakeholders have stated in every overarching engagement workshop in the last 10+ years that despite WPD's network reliability levels improving year-on-year and achieving best ever performance levels, they will not entertain any regression in this performance, even if it resulted in lower bills (the offer of this option in willingness to pay surveys over this period has always been roundly rejected). This option would also be contrary to WPD's values, which seeks to deliver industry leading network and customer service performance and deliver a culture that seeks continual improvement in all we do. There is also ultimately no guarantee that it will result in bill savings. It would lead to inefficient ways of working by waiting for faults reactively rather than proactively taking steps to prevent them from occurring and investing in technology to speed up restoration times if faults do occur. A worsening in network performance would also have a hugely negative potential impact on customer service and satisfaction levels.

	B.	Maintain: Average power cut frequency of one every two years; and an average power cut duration of 24 minutes	x	✓	✓	x		Maintain existing excellent network performance and reliability levels for customers (which have historically achieved better than target).	Offered and rejected: Stakeholders have been very clear that in order to avoid any risk of regression in performance, WPD must target continual, albeit incremental due to our exceptional baseline levels of service and therefore starting point for RIIO-ED2. It would also be against WPD's values not to seek continual improvement, especially in an areas that is WPD's fundamental purpose and reason for existing for our customers. It is also unclear how this would be achieve in practice as aiming simply to stand still would likely require the same existing staff base (as WPD has driven significant efficiencies in our operations throughout RIIO-ED1), but to choose simply to not continue to drive and implement further efficiencies in RIIO-ED2 when they arise.
	C.	Incremental improvement: Average power cut frequency better than one every two years; and an average power cut duration better than 24 minutes (Improvement levels in line with Ofgem's stretch targets of: 0.5% reduction in customer interruptions (frequency) and 2% reduction in customer minutes lost (duration))	✓	✓	✓	✓	The vast majority of WPD's £6.7bn Totex contributes to the delivery of this outcome. At least £1.5bn is for asset replacement explicitly, although £5.6bn (Totex, minus load related reinforcement) covers wider activities including refurbishment, diversions, overhead line tree clearances, flood mitigation, quality of supply improvements, fault response, inspections maintenance and repairs, engineering management, transport (to attend faults) etc.	Improve on existing, excellent network reliability levels (achieving better than Ofgem benchmarked targets for DNOs).	Offered: This option aligns perfectly with stakeholder feedback. It seeks continual improvement, at a stretching but realistic level of performance, and at no additional cost to customers. We will target the delivery of improved performance in RIIO-ED2 while maintaining expenditure at existing RIIO-ED1 levels (subject to a 0.5% ongoing efficiency saving).
	D.	Dramatically improve: E.g. above Ofgem targets	✓	✓	x	x	Unlimited. for example, 10% addition to Totex = £620m (£3.10 on the bill per year)	Improve on existing, excellent network reliability levels (achieving better than Ofgem benchmarked targets for DNOs).	Offered and rejected: While stakeholders have consistently implored WPD to seek continual improvement, they have done so in the context of considering WPD's existing reliability levels to be exceptional and therefore they have ruled out the need for dramatic improvements. They prefer focus to be given to improving service for customers that are significantly outside of the average performance levels (Worst Served Customers) rather than seeking to deliver larger percentage improvements to WPD's already excellent average. To do so could lead to potential very high bill impacts, which stakeholders do not support.
<p><u>Consideration of wider alternatives:</u> As key enablers to this overarching core commitment, there are additional actions WPD has committed to deliver. WPD's co-creation events resulted in unprompted stakeholder suggestions in relation to a number of areas associated with improving overall network reliability, including for example, projecting the network from the risk of flooding and storms. The vast majority of these are included as wider commitments that we</p>									

will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. These include:

Topic: Protect the network from risk of flooding	
Stakeholder created actions:	Included in WPD's plan?
a) Use long term climate scenarios and work with housing developers and utilities to mitigate risk	Yes – we will continue to utilise the latest Environment Agency data to drive our risk analysis to identify sites for protection measures
b) Explore innovative ideas for flood defence and invest in these	Yes
c) Avoid building sub stations on flood plains and relocate those that are / Formalise engagement with LAs on housing developments: advise against building on floodplains	Yes – we will liaise with developers and Local Authorities to try to ensure the location of new developments are appropriate and where several prospective sites are under consideration the impact of the risk of flooding on WPD's equipment is taken into account. However, we ultimately have a statutory duty to connect where the customer requests.
d) Have an ongoing focus on flood protection	Yes
e) Consider the role of trees in flood prevention and plant more trees in appropriate locations	No – limited impact on flood mitigation on the scale required to remove risk of disruption to substations
f) Be a consultee and have an influence on the planning process	Yes
g) Carry out a review of vulnerable assets. Ensure substations have adequate defences and underground cables where necessary	Yes
h) Share scenario planning and GIS data with stakeholders	Yes
i) Prioritise those substations in flood plains for replacement	No
j) Share best practice and work with others	Yes
k) Support communities to understand critical infrastructure, including location of substations	Yes – part of engagements with Local Authorities and Local Resilience Forums
l) Forecast the future case for vulnerable customers in high risk flooding areas	Yes – WPD's social indicator mapping will be used as a factor in the prioritisation of network investment schemes
m) Install flood protection as standard in new substations	Yes – substations built in high risk flood areas will have in-built protections in their design
n) Liaise and collaborate with relevant parties including government, LAs, and the EA	Yes
Topic: Tree cutting	
Stakeholder created actions:	Included in WPD's plan?
a) Adopt an environmentally sustainable approach to tree cutting, replacing trees you fell	Yes
b) Underground cables where appropriate	Yes
c) Engage with communities and make it simpler for customers to report issues	Yes
d) Engage with stakeholders including landowners, Woodland Trusts, charities to enhance biodiversity and to minimise your impact on wildlife	Yes
e) Take a strategic approach to your tree cutting programme and base your approach on cost benefit analyses and environmental impact	Yes
f) Work with local stakeholders to identify locations for tree planting and encourage the involvement of local groups	Yes
g) Assistance with maintenance costs for landowners	No
h) Continue tree cutting for high risk circuits	Yes
i) Better reporting on tree cutting programme	Yes
j) Focus on species of tree for cutting and replacement	Yes
k) Work strategically with local authorities' environmental teams on initiatives relating to clearing of debris to prevent flooding and the recycling of cut wood	No – responsibility for this sits with the EA and LAs
l) Maintain tree trimming programme but ensure trimming done only when necessary	Yes
m) Make tree cutting part of a thorough planning process: work pre-emptively to prevent issues	Yes

	n) Engage, educate and inform customers as to their role, e.g. don't plant trees close to overhead wires	Yes												
3. Costs are efficient and benefits of the actions plausibly outweigh the costs	<p>We will deliver lower fault unit costs in RIIO-ED2 than we are currently delivering in RIIO-ED1, while total expenditure will be subject to an ongoing efficiency saving of at least 0.5%. The majority of the Totex increase being proposed above RIIO-ED1 levels is to deliver smart systems and the DSO transition; by contrast expenditure to improve quality of supply is broadly flat despite improvements committed to in terms of service.</p> <p>Our willingness to pay research reveals that there is significant value placed by customers on incrementally reducing the number of planned power cuts (£0.99 extra per customer, per year) and on incrementally improving speed of restoration when faults do occur (£1.68), whereas WPD is proposing to deliver both of these outcomes without the need to increase customer bills.</p>													
4. Customers, as well as stakeholders, support the Business Plan	<p>As Supplementary Annex SA-05 outlines, as part of our Business Plan refinement phase and responses to our draft Business Plan consultations, 92% of stakeholders supported a commitment to deliver on average fewer and shorter power cuts in RIIO-ED2 than RIIO-ED1. Only 8% stated they wanted to see greater ambition or an alternative commitment, although when probed the majority stated their reasons were that they wanted WPD to better quantify the improvements that will be offered. Having done so in WPD's second draft consultation and set the targets as per the core commitment now stated, 82% of stakeholders found this to be acceptable, as did 86% of surveyed end user customers.</p> <p>In further evidence of the appropriateness of the scale of improvement being proposed by WPD in relation to power cuts, WPD tested options in relation to a wider commitment regarding the percentage of customers to be restored with one hour of a power cut on the high voltage network. From a starting point of an average of 85% in RIIO-ED1, WPD offered uncapped options to improve on this in RIIO-ED2. A majority voted for the option to see performance improve only incrementally by 1% from existing levels:</p> <div><table><thead><tr><th>Option</th><th>Percentage of vote</th></tr></thead><tbody><tr><td>1: 0.85 (-1p on annual bill)</td><td>2%</td></tr><tr><td>2: 0.86 (bill as today)</td><td>52%</td></tr><tr><td>3: 0.87 (+0.5p on annual bill)</td><td>6%</td></tr><tr><td>4: 0.88 (+1p on annual bill)</td><td>36%</td></tr><tr><td>5: I would prefer to suggest an alternative (discussion session upcoming)</td><td>4%</td></tr></tbody></table></div>		Option	Percentage of vote	1: 0.85 (-1p on annual bill)	2%	2: 0.86 (bill as today)	52%	3: 0.87 (+0.5p on annual bill)	6%	4: 0.88 (+1p on annual bill)	36%	5: I would prefer to suggest an alternative (discussion session upcoming)	4%
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5. Customers are not exposed to unacceptable risks	WPD's performance in relation to network reliability will be subject to a financial ODI as part of Ofgem's IIS. As part of this WPD will face financial penalties in the result of under delivery and targets being missed in relation to customer interruptions (frequency of power cuts) and Customer Minutes Lost (duration of power cuts).
6. Assurance undertaken	Not applicable. This is a core Ofgem assessed area, and part of a significant financial ODI, as part of which WPD's performance will be reported and benchmarked against all other DNOs on an annual basis.

Commitment 34: Worst Served Customers

Improve service for at least 8,260 Worst Served Customers by undertaking 70 schemes.	
Justification criteria:	WPD action:
Desired outcome - agreed with stakeholders (see Annex 5)	Significantly improved supply reliability for customers that have experienced a significantly poorer service (higher volumes of power cuts) than the average. Improvements will result in less inconvenience and disruption for customers. Aim to improve service to the total number of Worst Served Customers known at the beginning of RIIO-ED2, such that they are no longer classified as Worst Served by the end of the period.
1. Actions are appropriate for a DNO	<p>The Electricity Distribution Licence states that the Licensee is responsible for the development, maintenance and operation of an efficient, coordinated, and economical Distribution System.</p> <p>In RIIO-ED1, 'Worst Served Customers' were defined as those who experience 12 or more, 11kV or higher interruptions over a three year period, with a minimum of three in each year. For RIIO-ED2, Ofgem has revised the definition to be based upon having a minimum of two in each year, which has increased the number of customers that are defined as worst served. Using the revised RIIO-ED2 definition, there were approximately 9,000 Worst Served Customers across the four WPD licence areas in 2020/21.</p> <p>In Sector Specific RIIO-ED2 Methodology Consultation (SSMC), Ofgem defines the Worst Served Customer (WSC) mechanism to address the experience of customers who may not be adequately catered for by the Interruptions Incentive Scheme (IIS), particularly those who experience an unusually high number of interruptions.</p> <p>Our stakeholders have consistently raised as a high priority the requirement for WPD to carry out work to improve the network reliability for our Worst Served Customers. Some of the most vulnerable customers live in isolated and rural communities who would not come top of our list for improvement if decisions were based solely on the total number of customers benefitting from each scheme.</p> <p>Following on from the Covid-19 pandemic we recognise that more customers will be working from home and as the UK government seek to achieve decarbonisation targets there will be a greater reliance on electricity to heat homes and provide power for EVs. This means that there will be a greater reliance upon electricity supplies and a need to reduce power cuts.</p> <p>As a DNO, WPD is responsible for ensuring security of supply for its customers and optimise network performance. The expertise this necessitates means we are therefore well placed to deliver it to our customers. This is due to our expertise in electrical engineering, network maintenance and network operations, and due to our recent experience in improving the performance of our network. Solutions adopted during RIIO-ED1 include network reconfiguration, replacement of poor condition overhead lines, undergrounding of overhead lines, refurbishment of circuit components and installation of additional switching points/protection zones. WPD has undertaken multiple projects to increase the reliability of the network on poorest performing circuits throughout RIIO-ED1, delivering 48 improvement schemes in the first five years.</p>

2. Considered alternative approaches (and options presented were sufficiently ambitious)	Why did we offer these options / evidence of appropriate ambition:																								
	Options considered:		Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?	Cost	Benefit	Considerations and final decision:																
	A.	<i>Minimum:</i> No Worst Served Customer improvement schemes	✗	✓	✗	✗	£0m	Marginal bill reduction, poor service continues for a significant number of customers, which may increase further in RIIO-ED2 as the network ages.	This option would not fulfil the desired outcome, raised by stakeholders as a key priority, and it would also put WPD in breach of Ofgem guidance and expectations (e.g. Ofgem has a multiple interruptions guaranteed standard to incentivise DNOs to improve service for customers on the poorest performing circuits). There is no stakeholder support for this option and it would also not prove cost effective as any saving made by not carrying out network improvement schemes will be somewhat offset by the increased fault management costs of responding reactively to numerous power cuts when they occur.																
	B.	<i>Maintain:</i> 40 Worst Served Customer network improvement schemes (in line with RIIO-ED1 delivery volumes and reduction rates in overall Worst Served Customers)	✗	✓	✓	Tested & rejected	£2.8m	Improve service for 57% of total Worst Served Customers as defined in RIIO-ED1.	As this commitment is a network improvement activity focused on a finite number of customers, we selected options ranging from maintaining a comparable level of activity to that in RIIO-ED1, through to the complete elimination of Worst Served Customers (as per the RIIO-ED1 definition). At the time of presenting these options to stakeholders, the subsequent change to the definition of a Worst Served Customer for RIIO-ED2 was not known. We did however test the option to invest in a greater number of schemes and benefitting more customers than are currently classified as worst served, in order to maintain the virtual elimination of Worst Served Customers over time as the network ages and vegetation grows; factors which increase the risk of new customers becoming worst served unless pre-emptive action is taken.																
		<i>Increase:</i> 50 Worst Served Customer network improvement schemes (RIIO-ED1 delivery volumes and reduction rates in overall Worst Served Customers, plus 10 additional schemes)	✗	✓	✓	Tested & rejected	£3.2m	Improve service for 71% of total Worst Served Customers as defined in RIIO-ED1.																	
		<i>Further increase:</i> 60 Worst Served Customer network improvement schemes (RIIO-ED1 delivery volumes and reduction rates in overall Worst Served Customers, plus 20 additional schemes)	✗	✓	✓	Tested & rejected	£3.6m	Improve service for 86% of total Worst Served Customers as defined in RIIO-ED1.																	
<table><tr><td></td><td>Option 1:</td><td>Option 2:</td><td>Option 3:</td><td>Option 4:</td><td>Option 5:</td></tr><tr><td>Ambition level:</td><td>40 schemes benefitting 4,720 Worst Served Customers</td><td>50 schemes benefitting 5,900 Worst Served Customers</td><td>60 schemes benefitting 7,080 Worst Served Customers</td><td>70 schemes benefitting 8,260 Worst Served Customers</td><td>Even further ambition / an alternative (uncapped)</td></tr><tr><td>Bill impact:</td><td>-0.5p</td><td>No bill impact</td><td>+0.5p</td><td>+1p</td><td>-</td></tr></table>										Option 1:	Option 2:	Option 3:	Option 4:	Option 5:	Ambition level:	40 schemes benefitting 4,720 Worst Served Customers	50 schemes benefitting 5,900 Worst Served Customers	60 schemes benefitting 7,080 Worst Served Customers	70 schemes benefitting 8,260 Worst Served Customers	Even further ambition / an alternative (uncapped)	Bill impact:	-0.5p	No bill impact	+0.5p	+1p
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C.	<i>Maximum (as per the RIIO-ED1 definition known at the time):</i> 70 Worst Served Customer network improvement schemes (RIIO-ED1 delivery volumes and reduction rates in overall Worst Served Customers, plus 30 additional schemes)	✓	✓	✓	✓	£4m	Improve service for 100% of total Worst Served Customers as defined in RIIO-ED1.																		

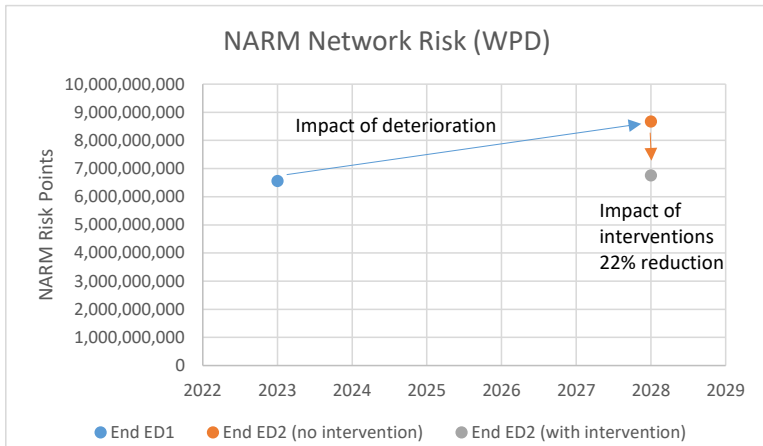
	<p>D. <i>Maximum – plus begin to tackle those outside of the Worst Served Customer threshold:</i> More than 70 Worst Served Customer network improvement schemes (virtually eliminate the number of Worst Served Customers against the new RIIO-ED2 definition)</p> <p>✓ ✓ ✓ ✓</p> <p>£4.4m</p> <p>Improve service for 100% of total Worst Served Customers as defined in RIIO-ED1, and a further number of customers potentially becoming worst served within the RIIO-ED2 period.</p>																																				
	<p><u>Consideration of wider alternatives:</u></p> <p>As key enablers to this overarching core commitment there are additional actions WPD has committed to deliver. WPD's co-creation events resulted in unprompted stakeholder suggestions for how to address issues with Worst Served Customers. The vast majority of these are included as wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. These include:</p> <table border="1" data-bbox="544 611 2067 1161"> <thead> <tr> <th colspan="2">Topic: Worst Served Customers</th></tr> <tr> <th>Stakeholder created actions</th><th>Included in WPD's Plan?</th></tr> </thead> <tbody> <tr> <td>a) Investigate the use of battery storage to help make Worst Served Customers more resilient</td><td>No – beyond the role of a DNO</td></tr> <tr> <td>b) Carry out assessments to better understand and map Worst Served Customers, ensuring they received tailored support mechanisms</td><td>Yes</td></tr> <tr> <td>c) Create a clear plan with targets to reduce Worst Served Customers, including what constitutes minimum standards</td><td>Yes</td></tr> <tr> <td>d) Focus on rural areas, ensuring they're as well served as urban areas</td><td>Yes</td></tr> <tr> <td>e) Prioritise Worst Served Customers who are vulnerable and / or fuel poor</td><td>Yes</td></tr> <tr> <td>f) Improve communications with Worst Served Customers being mindful not everyone is online</td><td>Yes</td></tr> <tr> <td>g) Have a transparent prioritisation strategy when it comes to Worst Served Customers</td><td>Yes</td></tr> <tr> <td>h) Provide compensation for Worst Served Customers, taking into account both frequency and duration of outages</td><td>Yes</td></tr> <tr> <td>i) Commit to reducing Worst Served Customer numbers to zero</td><td>Yes</td></tr> <tr> <td>j) Define the term 'worst served' more clearly, perhaps changing to 'most challenged', and set realistic parameters as to what these customers can expect from your service</td><td>No – specified by Ofgem</td></tr> <tr> <td>k) Collaborate with Local Authorities to map and support worst served</td><td>Yes</td></tr> <tr> <td>l) Invest in undergrounding for worst served rural customers</td><td>Yes – if appropriate</td></tr> <tr> <td>m) Set yourselves localised targets</td><td>Yes</td></tr> <tr> <td>n) Invest ahead of need to improve service to worst served</td><td>No – Ofgem's Worst Served Customer mechanism requires customers to be at the proven threshold before schemes are undertaken</td></tr> <tr> <td>o) Adopt innovation to find new ways of supporting Worst Served Customers</td><td>Yes</td></tr> <tr> <td>p) Do more to promote new options for Worst Served Customers</td><td>No – unclear</td></tr> </tbody> </table>	Topic: Worst Served Customers		Stakeholder created actions	Included in WPD's Plan?	a) Investigate the use of battery storage to help make Worst Served Customers more resilient	No – beyond the role of a DNO	b) Carry out assessments to better understand and map Worst Served Customers, ensuring they received tailored support mechanisms	Yes	c) Create a clear plan with targets to reduce Worst Served Customers, including what constitutes minimum standards	Yes	d) Focus on rural areas, ensuring they're as well served as urban areas	Yes	e) Prioritise Worst Served Customers who are vulnerable and / or fuel poor	Yes	f) Improve communications with Worst Served Customers being mindful not everyone is online	Yes	g) Have a transparent prioritisation strategy when it comes to Worst Served Customers	Yes	h) Provide compensation for Worst Served Customers, taking into account both frequency and duration of outages	Yes	i) Commit to reducing Worst Served Customer numbers to zero	Yes	j) Define the term 'worst served' more clearly, perhaps changing to 'most challenged', and set realistic parameters as to what these customers can expect from your service	No – specified by Ofgem	k) Collaborate with Local Authorities to map and support worst served	Yes	l) Invest in undergrounding for worst served rural customers	Yes – if appropriate	m) Set yourselves localised targets	Yes	n) Invest ahead of need to improve service to worst served	No – Ofgem's Worst Served Customer mechanism requires customers to be at the proven threshold before schemes are undertaken	o) Adopt innovation to find new ways of supporting Worst Served Customers	Yes	p) Do more to promote new options for Worst Served Customers	No – unclear
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p) Do more to promote new options for Worst Served Customers	No – unclear																																				
<p>3. Costs are efficient and benefits of the actions plausibly outweigh the costs</p>	<p>When presenting the options to stakeholders, WPD were able to offer to deliver more Worst Served Customer improvement schemes in RIIO-ED2 than in the first five years of RIIO-ED1. The investment carried out in RIIO-ED1 cover a range of different solutions that are tailored to the particular circumstances encountered for each group of Worst Served Customers. This means that appropriate and efficient activities are carried out to make the network performance improvements.</p>																																				

	<p>The Regulatory WSC mechanism has an in-built cap per customer, which limits how much cost can be funded. This further drives the identification of efficient solutions for resolving the network issues.</p> <p>The minimum level of improvement that is expected from the investments is a reduction of 25% in the number of faults, but in many cases the actual improvements are significantly higher. This means that the customer who were previously worst served see a big improvement in the reliability of their power supplies. Where this is not achieved, WPD does receive funding for the investment. This drives us to deliver solutions that make improvements, while the cost caps ensure that the solution adopted are efficient.</p> <p>Customers place significant value on the achievement of this outcome, with a mean value of £0.85 per customer, as revealed by WPD's willingness to pay research (see Supplementary Annex SA-05), which results in a total of £34m value across the five years. The total expenditure for this commitment per year equates to £4m in total, which is outstripped significantly by the value placed on it by customers.</p> <p>In addition, as reliance on home working has increased as a result of the Covid-19 pandemic it is likely that there are additional benefits to customers of fewer power cuts due to a reduction in disruption to working customers, especially loss of business for owners of small businesses that may be run from the home. As this is a recently emerged factor for consideration there is limited information on the precise proportion of home workers specifically among the c.6,000 WPD customers currently classified as worst served. However, WPD's willingness to pay value research, which saw wider consumers place a value of £0.99 per customer on the achievement of fewer power cuts, gives some indication of the considerable added value to customers likely to be achieved by this commitment specifically for Worst Served Customers.</p>
4. Customers, as well as stakeholders, support the Business Plan	<p>As Supplementary Annex SA-05 outlines in detail, at all stages of our engagement programme stakeholders were very passionate about helping and prioritising Worst Served Customers. Feedback was that four power cuts every year feels high and would be inconvenient, but c.6,000 properties out of 8m is very low and impressive, and indicates the successful steps WPD has already taken to significantly address this problem throughout RIIO-ED1. Some expressed concern that a lot of the most vulnerable live in isolated and rural communities who wouldn't come top of our list for improvement if decisions are based solely on the total number of customers benefitting from each scheme.</p> <p>As part of the first draft Business Plan, we committed to undertake 50 schemes to benefit approximately 5,900 customers. In our consultation, we gave our customers five options and the results are shown below:</p>

	<p>Association Engineering Recommendation for Security of Supply P2/7, which specifies the expected capability of the network to meet demands under defined outage conditions, and the Electricity Safety, Quality and Continuity Regulations (ESQCR), which defines voltage limits.</p> <p>To ensure we meet the reinforcement targets required, we have used numerous data sources, including national forecasts of growth by the ESO and local information about regional aspirations. Supplementary Annex SA-06a: 'Load Related Expenditure' provides more detail on our primary network and secondary network reinforcement plans and wider expenditure plans to improve the overall reliability of the network, including outlining the various data sources used to provide assurance that they are appropriate.</p>
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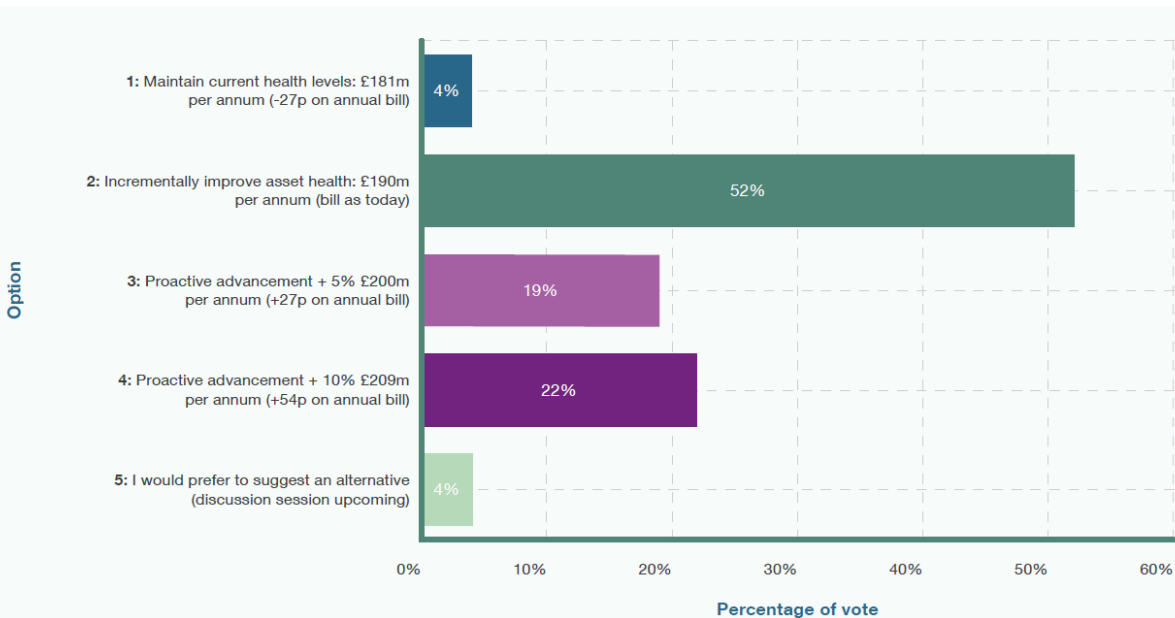
Commitment 35: Improved network health

Counteract deterioration of network assets through an investment of £216 million per annum, delivering a 22% change in risk to keep network risk at similar levels to the start of the price control period.	
Justification criteria:	WPD action:
Desired outcome - agreed with stakeholders (see Annex 5)	Reducing the risk of unplanned power cuts by improving the reliability of our network by replacing equipment in the poorest condition
1. Actions are appropriate for a DNO	<p>The Electricity Distribution Licence states that the Licensee is responsible for the development, maintenance and operation of an efficient, coordinated, and economical Distribution System. RIIO-ED2 Business Plan guidance sets out the baseline expectations in regard to maintaining a safe and resilient network, and that the DNO must set out the company's views on asset health, criticality and replacement priorities all throughout the RIIO-ED2 period.</p> <p>This commitment addresses the fundamental purpose of WPD's role as DNO to provide a safe and secure supply of energy for our customers. WPD's expertise, specifically electrical engineering and in managing a high number of schemes for the network development enables the delivery of this commitment. The network WPD operates is comprised of more than 220,000km of overhead lines and 185,000 substations. The millions of assets (such as transformers, overhead lines and cables) in our network require appropriate actions to counteract the deterioration of the assets as they age.</p> <p>We therefore have a comprehensive rolling programme of asset replacement to prevent the deterioration of the network over time. The replacement of assets is prioritised according to the condition of the asset and the risk to the network if it fails. Historically, asset replacement has accounted for the largest part of our capital expenditure, leading to the introduction of regulatory mechanisms to ensure DNOs are delivering agreed work programmes. During RIIO-ED1, Network Asset Secondary Deliverables (NASD) were used, where both the probability of failure (represented by an asset's health) and consequences of failure resulted in a risk measure. For RIIO-ED2, Ofgem has extended the concept of NASD which looked at risk at a point time, to Network Asset Risk Metrics (NARMs) which consider the future risk associated with an asset calculated over a number of years. NARMs are applied to approximately two thirds of the asset replacement programme and inform the scale of asset replacement activity in RIIO-ED2.</p>

2. Considered alternative approaches (and options presented were sufficiently ambitious)		Why did we offer these options / evidence of appropriate ambition:						
Options considered:		Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?	Cost	Benefit	Considerations and final decision:
A.	<i>Do nothing:</i> Worsened health levels	✗	✓	✓	✗	Zero	None: 22% deterioration in asset health risk points from end of RIIO-ED1.	Rejected : Not a viable option as it would put us in breach of our licence obligation to maintain and operate a reliable distribution system. This option would not achieve the objective as it would inevitably lead to a greater increase in unplanned power cuts.
B.	<i>Incremental improvement:</i> 11% improvement in asset health (slight worsening to existing risk level)	✗	✓	✓	✗	£0.5bn	Asset health improvement, but at a rate that still sees an increase in total network risk.	Offered and rejected: Overall network risk would be higher due to overall deterioration of assets. Some poor condition assets left on network, resulting in greater asset failure risk and thus higher levels of unplanned power cuts.
C.	<i>Improvement:</i> 11% improvement in asset health 22% improvement in asset health (maintain existing risk level)	✓	✓	✓	✓	£1.05bn	Asset health improvement at a rate which our modelling shows is the optimal balance between the cost of replacing assets versus the impact of unplanned power cuts.	Offered: This option will address all assets that have the most urgent need for intervention to mitigate the risk of failure. This considers the improvement that can be made relevant to doing nothing. It shows that the proposed interventions lead to a risk reduction of 22% which counteracts the impact of the deterioration of the network. The net impact is that network risk is broadly at the same level at the end of RIIO-ED2 compared to the start of RIIO-ED2. 

	D.	Proactive enhancement (+5%): 27% improvement in asset health	✓	✓	✗	Tested & rejected	£1.1bn	Asset health improvement at a rate 5% above which our modelling shows is the optimal balance between the cost of replacing assets versus the impact of unplanned power cuts.	Offered and rejected: Address assets that have deteriorated but not to a condition that are likely to fail – therefore replacing assets before they need to be, which incurs additional cost for little network performance benefit.
	E.	Proactive enhancement (+10%): 32% improvement in asset health	✓	✓	✗	Tested & rejected	£1.2bn	Asset health improvement at a rate 10% above which our modelling shows is the optimal balance between the cost of replacing assets versus the impact of unplanned power cuts.	
	F.	Realistic maximum: More than 32% improvement in asset health	✓	✓	✗	Tested & rejected	£1.2bn-£42.5bn range	Asset health improvement at a rate greater than 10% above which our modelling shows is the optimal balance between the cost of replacing assets versus the impact of unplanned power cuts.	
	G.	Maximum: Replace everything	✗	✗	✗	✗	£42.5bn	Brand new network, limiting (but not fully removing) risk of failure as much as possible.	Rejected: The option is cost prohibitive and does not have stakeholder support. It is also impractical to achieve due to a lack of workforce to deliver, plus despite removing perfectly functioning assets just to ensure every asset is brand new and therefore has the best possible health rating, there would still be asset failure risk.
<p><u>Consideration of alternatives:</u></p> <p>As key enablers to this overarching core commitment there are additional actions WPD has committed to deliver. WPD's co-creation events resulted in unprompted stakeholder suggestions for how to address this topic. The vast majority of these are included as wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. These include:</p>									

	Topic: Overall health of network assets																
	Stakeholder created actions	Included in WPD's Plan?															
	a) Create accurate forecasting models and ensure that assets can respond to future (higher) demand	Yes															
	b) Continue maintenance and replacement programme for ageing assets (ensure sufficient resources to do so)	Yes															
	c) Be transparent about the health of assets, providing better and clearer information	Yes															
	d) Use AI, innovative technology and smart data to effectively monitor the condition of assets	Yes															
	e) Create more localised, resilience plans	Yes															
	f) Focus on smaller / micro-grid networks	No															
	g) Plan proactively for the impacts of climate change	Yes															
	h) Create a register of assets and their health	Yes															
	i) Carry out more routine inspections for ageing assets	Yes															
	j) Consider the health of assets and don't base this solely on their age	Yes															
	k) Review assets in light of climate change and extreme weather events	Yes															
	l) Create a map of ageing assets	Yes															
	m) Share and communicate capacity constraints	Yes															
	n) Continue to train, up-skill and future proof WPD workforce	Yes															
3. Costs are efficient and benefits of the actions plausibly outweigh the costs	WPD has delivered industry leading cost efficiency for asset replacement in RIIO-ED1 as per Ofgem benchmarking, which demonstrates we are able to deliver significant benefit for an effective unit cost for the customer. Our RIIO-ED2 expenditure will continue to benefit from our efficient unit costs, including factoring in an ongoing efficiency challenge to drive costs lower. We have also worked with GHD, who have reviewed the unit costs that we have prepared for our asset replacement forecast. GHD's conclusion is that the "resulting unit costs for each asset are typical, accurate and efficient".																
	<p>As part our asset replacement programmes, we will also be factoring in initiatives to address network losses for example, including increasing the minimum cable size WPD installs, which delivers a dual benefit of additional capacity and improved losses benefits.</p> <p>As indicated in the commitment approach options, the estimated cost for the realisation is £216m per annum which relates to Option 2. The table below shows the estimated impact of the options we presented on our customers energy bill.</p> <table><tr><td>Option 1:</td><td></td><td>Option 2:</td><td></td><td>Option 3:</td><td></td><td>Option 4:</td><td></td></tr><tr><td>Maintain current asset health levels:</td><td>-27p</td><td>Incrementally improve asset health levels:</td><td>-</td><td>Proactively advancement +5%:</td><td>+27p</td><td>Proactively advancement +10%:</td><td>+54p</td></tr></table> <p>The benefits of this commitment will be reflected on the reliability of our network against increasing risks from the deterioration of the millions of assets on the network.</p> <p>NARMs are used to identify the most cost beneficial activity for each asset category and this analysis is supplemented by other modelling techniques to derive forecast requirements. The asset replacement activity for RIIO-ED2 takes into account the current network requirements and how the network will deteriorate. The forecast number of poor condition assets is used to derive forecast volumes. This activity results in reduction to risk associated with the assets that are replaced. However, the remainder of the network continues to deteriorate and increase in risk. The net effect of the reduction from the proposed interventions and the deterioration of the remainder of the network means that WPD will broadly maintain the overall health of the assets (as measured by the risk metrics).</p> <p>We have developed a programme of replacement that provides activities across all asset categories to ensure that a proportion of the network is being renewed each year. We have not been driven by maximising the risk reduction available because this would potentially lead to high volumes of activity for some asset categories at the expense of no activity on others. This would mean that some asset categories would never be selected for activity leading to eventual deterioration and higher fault volumes.</p>		Option 1:		Option 2:		Option 3:		Option 4:		Maintain current asset health levels:	-27p	Incrementally improve asset health levels:	-	Proactively advancement +5%:	+27p	Proactively advancement +10%:
Option 1:		Option 2:		Option 3:		Option 4:											
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	<p>In addition, customers place significant value on the achievement of this outcome, with a mean value of £0.99 per customer, as revealed by WPD’s Willingness to Pay research (see Supplementary Annex SA-05), which results in a total of £39.5m value across the 5 years. Customers placed this value on a tested commitment level of a 10% improvement on asset health levels, which WPD is now proposing to surpass significantly (22% improvement) at a much lower cost (noting that the improvement is measured relative to doing nothing). The total expenditure for this commitment per year equates to £210m in total, which will not result in an increase in customer bills despite customers indicating a willingness for to pay up to an additional 99p per year, per customer to achieve it.</p>																		
4. Customers, as well as stakeholders, support the Business Plan	<p>As Supplementary Annex SA-05 outlines, our stakeholders were clear that they viewed addressing and improving the overall health of our assets as a top priority. As part of our first draft Business Plan consultation, our stakeholders were asked what level of investment they wanted us to commit to. Of the five options presented, the greatest proportion (52%) supported the chosen ambition level. Our stakeholders’ strong preference was for us to invest for incremental improvement, so our commitment is for an investment of £210 million per annum to achieve incremental improvement over the RIIO-ED2 period. The importance of reporting on the outcomes was emphasised, once a measure for overall asset health has been agreed with Ofgem.</p> <div><table><thead><tr><th>Option</th><th>Description</th><th>Percentage of vote</th></tr></thead><tbody><tr><td>1</td><td>Maintain current health levels: £181m per annum (-27p on annual bill)</td><td>4%</td></tr><tr><td>2</td><td>Incrementally improve asset health: £190m per annum (bill as today)</td><td>52%</td></tr><tr><td>3</td><td>Proactive advancement + 5% £200m per annum (+27p on annual bill)</td><td>19%</td></tr><tr><td>4</td><td>Proactive advancement + 10% £209m per annum (+54p on annual bill)</td><td>22%</td></tr><tr><td>5</td><td>I would prefer to suggest an alternative (discussion session upcoming)</td><td>4%</td></tr></tbody></table></div> <p>In our final acceptability testing before the July submission, this commitment at the current ambition level received 87% acceptance from customers – the highest score received across the Business Plan.</p>	Option	Description	Percentage of vote	1	Maintain current health levels: £181m per annum (-27p on annual bill)	4%	2	Incrementally improve asset health: £190m per annum (bill as today)	52%	3	Proactive advancement + 5% £200m per annum (+27p on annual bill)	19%	4	Proactive advancement + 10% £209m per annum (+54p on annual bill)	22%	5	I would prefer to suggest an alternative (discussion session upcoming)	4%
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5	I would prefer to suggest an alternative (discussion session upcoming)	4%																	

5. Customers are not exposed to unacceptable risks	The ultimate measure of the impact of WPD's expenditure to improve asset health is how this translates into the reliability of the network. WPD's performance in relation to network reliability will be subject to a financial ODI as part of Ofgem's Interruptions Incentive Scheme. The delivery of the asset replacement programmed will also be subject to a NARM ODI. As part of these incentive WPD will face financial penalties in the result of under delivery and targets being missed.
6. Assurance undertaken	Not applicable. This is a core Ofgem assessed area, and part of a significant financial ODI, as part of which WPD's performance will be reported and benchmarked against all other DNOs on an annual basis.

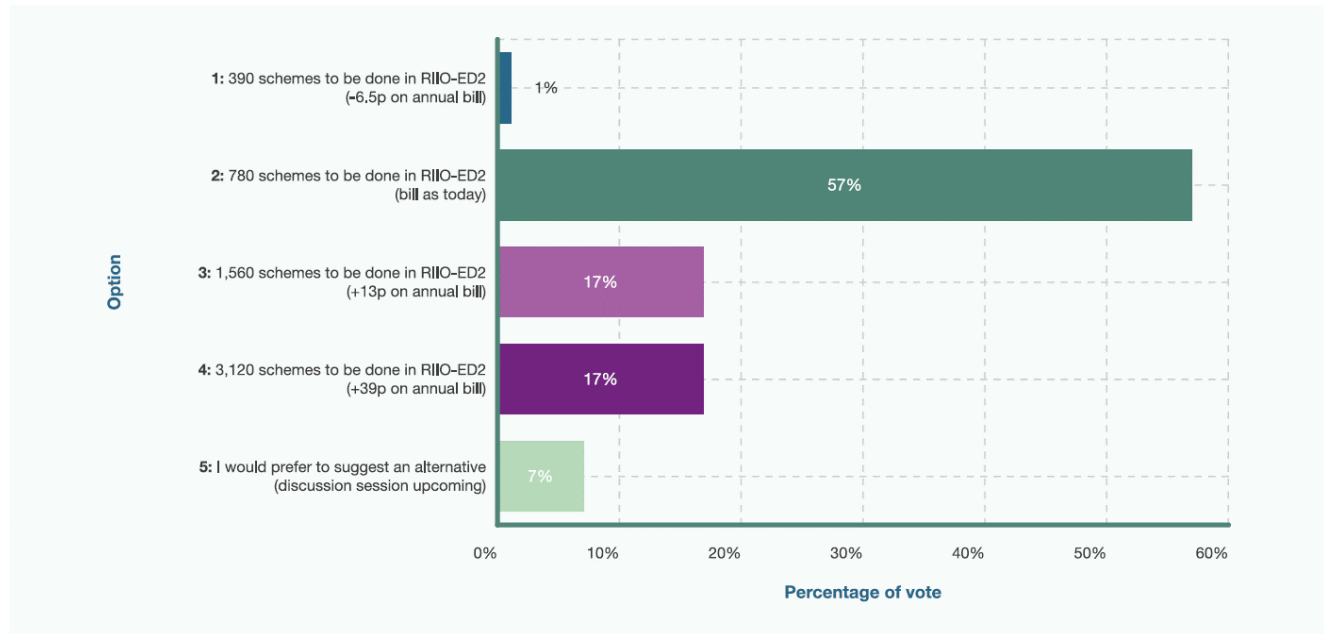
Commitment 37: Safety enhancements near schools

Increase the safety of around 200,000 children by delivering 780 schemes to underground, insulate or divert overhead lines that cross school playing areas.	
Justification criteria:	WPD action:
Desired outcome - agreed with stakeholders (see Annex 5)	To continue to ensure that school children come to no harm as a result of contact with our electricity distribution network, but targeting remedial works to remove the risk at the higher risk level schools.
1. Actions are appropriate for a DNO	<p>According to the Electricity Distribution Licence, the Licensee is responsible for the development, maintenance and operation of an efficient, coordinated, and economical Distribution System. The Licensee is also responsible for ensuring safety and resilience of the Distribution System assets, not only for staff but for general public. According to RIIO-ED2 Business Plan guidance, network companies shall and are incentivised to ensure long term safety and resilience.</p> <p>As a DNO, WPD maintains and develops a network with 220,000km of overhead lines. Some of these lines pass near schools or playgrounds where young children spend significant amounts of their time. Schools and playgrounds are risk assessed and WPD assets do not constitute a major safety risk, but the risk will never be null as long as children can see or access overhead lines.</p> <p>For instance, an incident occurred in Gloucester where a tree brought down a line across a school playing field - it was fortunate that this occurred out of hours rather than when children were playing. An assessment was carried out of all lines that cross school playing fields to assess their risks and all those classified as medium risk or higher are proposed to be addressed in RIIO-ED2.</p> <p>With that in mind, this commitment proposes to limit the sight or access to overhead lines. Thus, the realisation of this commitment will reduce the risk of harm to the general public, in particular young children.</p> <p>WPD's expertise is unique for the delivery of this commitment. We have the data about our overhead lines (location, height, etc.) and we are in a unique position to deliver the construction and electrical works required to reduce the risk of harm to children as a result of the electricity infrastructure in these areas. We will make use of our expertise in engineering as well as our past effective collaboration with local authorities and schools.</p>
2. Considered alternative approaches (and options presented were sufficiently ambitious)	<p><u>Why did we offer these options / evidence of appropriate ambition:</u></p> <p>Every school site in WPD's region has been subject to a safety survey and we have utilised an app to collect the data and arrive at a robust risk rating as below. The survey looked at schools to identify areas where children are likely to congregate (i.e. school playing fields or play grounds) that are also in close proximity to our assets. Then a risk rating is attributed to that site based on actual proximity to the playing area, the age and condition of the asset, the operating voltage and the existing insulation on asset. The risk assessment created four risk levels as below:</p> <p><i>Level 1 – HV & EHV Medium Risk</i> <i>Level 2 – All medium risk</i> <i>Level 3 – Medium and low risk</i> <i>Level 4 – Medium, low and very low risk</i></p> <p>All level 1 risk sites have been addresses in RIIO-ED1. Overall the school risk survey identified 1827 school sites where a risk is present; however it is possible to increase the scope of the work to include additional playing areas outside of schools (i.e. general public playgrounds).</p>

So when we went out to consultation we offered the highest level of schemes as 3,120 which consisted of 1,827 schools and 1,293 wider play areas that also matched the risk assessment thresholds outlined above.

Options considered:		Achieves outcome?	Technically feasible?	Cost effective?	Stakeholder support?	Cost	Benefit	Considerations and final decision:
A.	<i>Do nothing: Having already addressed HV&EHV risk lines, go no further</i>	✗	✓	✓	✗	Zero	No enhanced safety benefits.	Rejected: Doesn't achieve the outcome and therefore leaves a level of risk in place that stakeholders have told us they consider to be unacceptable.
B.	Education only to limit risk	✗	✓	✓	✓	£2.1m	Education would make the school children aware of the risk, however that risk would not be removed.	Offered: There is very strong stakeholder support for education and this is a separate core commitment that has received very strong support from stakeholders. However, in relation to this particular issue and the targeted outcome relating to keeping children safe near to our equipment particularly at school play areas, education mitigates some risk but does not remove the underlying hazard which can only be done by undergrounding/insulating/diverting the lines. We therefore offered stakeholders a number of options to go significantly further to understand if there was stakeholder support for doing so.
C.	<i>Maximum (all sites with any risk associated – medium, low and very low risk): Underground, insulate or divert all OH circuits near every school play area and other play areas (3120)</i>	✓	✓	✓	✗	£93.6m	This would remove the risks at the 1,827 known school sites with playing areas and a further 1,293 general public playing areas.	Offered and rejected: This option would remove the risks at all schools and an additional 1,293 general public playing areas within 5 years, but this was not supported by stakeholders. The stakeholders felt that this was a worthwhile exercise they were not prepared to have the bill impact increase of 13p per annum associated with undertaking this level of activity.
D.	(Medium and low risk) Underground, insulate or divert all OH circuits near every school play area (1560)	✓	✓	✓	✗	£46.8m	This would remove the risks at the 85% of known school sites with playing areas.	Offered and rejected: This option would remove the risks at all schools within 6 years should the same level continue in RIIO-ED3 but was not supported by stakeholders. The stakeholders felt that this was a worthwhile exercise they were not prepared to have the bill impact increase of 6.5p per annum associated with undertaking this level of activity.

	E.	All medium risk: Underground, insulate or divert all OH circuits near every school play area and other play areas (780)	✓	✓	✓	✓	£23.4m	This would remove the risks at the 43% of known school sites with playing areas.	Offered: This option would remove the risks at all schools within 12 years should the same level of activity continue in RIIO-ED3 and beyond. The stakeholders felt that this targeted schools' programme addressing the higher level of risk sites first was acceptable to them.																
	F.	Medium risk at HV and EHV only: Underground, insulate or divert all OH circuits near every school play area and other play areas (390)	✓	✓	✓	✗	£11.7m	This would remove the risks at the 21% of known school sites with playing areas.	Offered and rejected: This option would remove the risks at all schools within 24 years should the same level continue in RIIO-ED3 and beyond but was not supported by stakeholders. The stakeholders felt that this was a worthwhile exercise they were not prepared this lower level of activity.																
	<p><u>Consideration of alternatives:</u> During the Business Plan development stage, stakeholders were given the opportunity to co-create a number of actions in this areas, starting from a blank sheet of paper. Stakeholders suggested:</p> <table><tr><th colspan="2">Topic: Raising awareness of dangers of electricity to members of the public</th></tr><tr><th>Stakeholder created actions</th><th>Included in WPD's Plan?</th></tr><tr><td>a) Reach out to schools to inform children about the health and safety hazards that surround WPD assets</td><td>Yes</td></tr><tr><td>b) Communicate to members of the public about how they can report, and what they should report, on safety and health to improve the public health and safety culture</td><td>Yes</td></tr><tr><td>c) Provide electricity checks for home, for example checking the safety of wiring in households</td><td>No – beyond the role of a DNO</td></tr></table> <p>There were also calls for WPD to increase cable undergrounding with a view to increasing resilience and fostering sustainability. It would be beneficial to liaise with local planning authorities more effectively to ensure that play areas are not created under power lines. Stakeholders mentioned that it is important to identify other risk areas and assets with the greatest public risk, such as any civic play area or recreational ground.</p>									Topic: Raising awareness of dangers of electricity to members of the public		Stakeholder created actions	Included in WPD's Plan?	a) Reach out to schools to inform children about the health and safety hazards that surround WPD assets	Yes	b) Communicate to members of the public about how they can report, and what they should report, on safety and health to improve the public health and safety culture	Yes	c) Provide electricity checks for home, for example checking the safety of wiring in households	No – beyond the role of a DNO						
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3. Costs are efficient and benefits of the actions plausibly outweigh the costs	<p>In our initial consultation we set out the following options for customers with an indication of the likely bill impact:</p> <table><tr><th>Option 1</th><th></th><th>Option 2</th><th></th><th>Option 3</th><th></th><th>Option 4</th><th></th></tr><tr><td>390 Schemes to be done in RIIO-ED2</td><td>-6.5p</td><td>780 Schemes to be done in RIIO-ED2</td><td>-</td><td>1560 Schemes to be done in RIIO-ED2</td><td>+6.5p</td><td>3120 Schemes to be done in RIIO-ED2</td><td>+13p</td></tr></table> <p>The estimated cost for the realisation of this commitment is £11.4 million. A separate Engineering Justification Paper has been produced on WPD's expenditure in relation to this commitment, which follows Ofgem's specified format and will enable WPD's costs to be benchmarked to other DNOs. An additional factor in relation to efficient cost delivery is WPD's geographically based structure, where each scheme is designed and delivered by local staff who know the area best, which drives more efficient delivery solutions than a central design and delivery approach.</p>									Option 1		Option 2		Option 3		Option 4		390 Schemes to be done in RIIO-ED2	-6.5p	780 Schemes to be done in RIIO-ED2	-	1560 Schemes to be done in RIIO-ED2	+6.5p	3120 Schemes to be done in RIIO-ED2	+13p
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	<p>The expenditure category of ‘Legal and safety’ (of which this core commitment is part) will be subject to the Ongoing Efficiency that is applied in our plan to all Totex activities of 0.5%.</p> <p>Our willingness to pay research reveals that there is significant value placed by customers on taking action to lower the risk in this areas. This valued the achievement of the maximum delivery option at £1.39 extra a year. While stakeholders have told us they do not want us to go this far (to the maximum level), this is still as strong indication that this action area has significant value to our customers. As stakeholders have elected for a level one quarter the scale of the maximum, if we apply the same ratio to the social value this returns a figure of £0.35, against an area where we are proposing no bill increase from RIIO-ED1 levels, and the total expenditure of £11.4m over the years equates to less than 1p per customer as a portion of Totex.</p>																		
4. Customers, as well as stakeholders, support the Business Plan	<p>Our stakeholders were clear that they wanted us to focus on preventing any risk of harm for school children. As part of the first draft Business Plan, we committed to undertake 780 schemes to reduce the risk to school children from overhead lines crossing playing fields. As part of our first draft Business Plan consultation, our stakeholders were asked what level of scheme they wanted WPD to commit to. In our consultation, we gave our customers five options and the results are shown below.</p> <div><table><thead><tr><th>Option</th><th>Description</th><th>Percentage of vote</th></tr></thead><tbody><tr><td>1</td><td>390 schemes to be done in RIIO-ED2 (-6.5p on annual bill)</td><td>1%</td></tr><tr><td>2</td><td>780 schemes to be done in RIIO-ED2 (bill as today)</td><td>57%</td></tr><tr><td>3</td><td>1,560 schemes to be done in RIIO-ED2 (+13p on annual bill)</td><td>17%</td></tr><tr><td>4</td><td>3,120 schemes to be done in RIIO-ED2 (+39p on annual bill)</td><td>17%</td></tr><tr><td>5</td><td>I would prefer to suggest an alternative (discussion session upcoming)</td><td>7%</td></tr></tbody></table></div> <p>Of the five options, a significant proportion (57%) supported the ambition of 780 schemes. The fact that only 7% of stakeholders supported option 5 strongly indicates that stakeholders considered the options presented to be in the correct range and sufficiently ambitious. Of those selecting option 5 the majority asked WPD to provide a clearer outcome and to quantify the number of school children who would benefit from this commitment, which we have since done in the final version of this commitment.</p>	Option	Description	Percentage of vote	1	390 schemes to be done in RIIO-ED2 (-6.5p on annual bill)	1%	2	780 schemes to be done in RIIO-ED2 (bill as today)	57%	3	1,560 schemes to be done in RIIO-ED2 (+13p on annual bill)	17%	4	3,120 schemes to be done in RIIO-ED2 (+39p on annual bill)	17%	5	I would prefer to suggest an alternative (discussion session upcoming)	7%
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	In addition, 77% of customers supported this initiative as part of WPD's acceptance testing.
5. Customers are not exposed to unacceptable risks	<p>This will be treated as a reputational ODI within Ofgem's output framework and it will be measured and reported against annually.</p> <p>WPD has a proven track record of delivering against our stated commitments in this area and have successfully address all the risk sites at HV and EVH level within RIIO-ED1. The level negotiated with stakeholders for our RIIO-ED2 commitment, while an ambitious commitment is at a number of sites that is small in the context of our total work volumes in relation to network improvement schemes, and therefore there is very little risk of non-delivery. All actions in relation to this commitment are going to successfully reduce risk to children, which is an outcome stakeholders have consistently championed. Throughout RIIO-ED1 to date, focused safety campaigns designed to align with recognised public safety issues have proven to be effective and positively received by targeted audiences. Stakeholders have told us that safety should continue to be a priority for WPD. Future customers at the Youth Community Measures of Success Research thought that power lines can be very dangerous for children of school age, especially if they do not understand the dangers.</p> <p>The total expenditure to fund this initiative (£11.4m in 5 years) is very small in the context of our total expenditure of £6.7 billion and therefore we do not consider a PCD to be appropriate due to the lack of materiality in the unlikely event of under delivery and any risk to customers as a result of under delivery being extremely small.</p>
6. Assurance undertaken	<p>WPD ensures all teams and processes run in accordance with health and safety law, aiming to reduce accidents and harm for employees, customers, and the public. This is reinforced with operational aspects such as prizes for teams with the best safety records.</p> <p>Over RIIO-ED1, we delivered a strong performance in safety with 386,000 children taught about safety, four million customers issued with literature, and close engagement with both the Health and Safety Executive and our staff to deliver safety initiatives. This provides assurance that our future efforts are built on the solid foundations of our past work.</p>

6. Wider justification papers:

Commitment 3: Local authority (LA) engagement

Make it easy for customers to adopt low carbon technologies and achieve net zero in their region much sooner than 2050, by driving the delivery of ambitious local area energy plans and proactively engaging all 130 local authorities each year via 90 local energy surgeries.	
Justification criteria:	WPD action:
Desired outcome - agreed with stakeholders (see Annex 5)	Helping LAs and developers to create local energy plans that are high ambitious and achievable, in order to deliver a network ready for the future, as quickly as possible. Ensure the local energy requirements in each of our regions are fully understood and feed into our long term strategic planning in a timely and effective way. This is not simply about the volume of engagements undertaken; WPD will ensure that these are of high quality, conducted by WPD staff with adequate skills and knowledge (see relevant strategy document for further details) and will survey stakeholders after these engagements to identify improvements and assess the overall efficacy of our actions.
1. Actions are appropriate for a DNO	<p>With this commitment, WPD will leverage the work carried out currently and in the past with LAs to better plan the future decarbonised network.</p> <p>During the consultation of the RIIO-ED2 framework, some stakeholders wanted to see closer engagement between network operators and local authorities. There were several mentions of the need to align network planning with the delivery of local energy strategies. As a DNO, WPD is critical to this task, and is well placed to bring the requisite parties together in the planning effort.</p> <p>Net zero is a national target, but it will be delivered regionally. In the region served by WPD, nearly 80% of the LAs have declared climate emergencies, setting targets well in advance of 2050. It will take a collaborative approach between WPD and a wide range of stakeholders to achieve a decentralised energy system to deliver these ambitious targets.</p> <p>WPD is taking a leading role by engaging local stakeholders extensively to understand their priorities and bake these into our Business Plan commitments. We have engaged every LA in our region on our plans for RIIO-ED2, while providing key forecast information, as well as trusted advice and support to co-create their bespoke local energy plans, and ensuring they align with and inform WPD's DFES. In project EPIC, WPD is developing a standardised process that can be used with different local authorities to support the creation of integrated local energy plans, and in a format that can be incorporate back in the DFES analysis.</p> <p>When engaging LAs, we also sought feedback on the DFES projections, our proposed investment and LCT forecasts. As a result, we processed over 10,000 LA new development records as part of our DFES for 2020/21, achieving unprecedented granularity and accuracy in our forecasts - all of which helped shaped the accuracy of our planning for RIIO-ED2.</p>
2. Considered alternative approaches (and	<p><u>Why did we offer these options / evidence of appropriate ambition:</u></p> <p>In order to deliver the desired outcome the action required is self-evident – to initiate regular and effective engagement with Local Authorities. The only question was the frequency of these activities, with WPD offering stakeholders a range of options from contact every 5 years, through to</p>

options presented were sufficiently ambitious)	<p>the option of annual sessions. Within this, we also tested whether we should hold one meeting a year in each of our local distribution regions, through to three times a year (making 90 meetings in total annually).</p>																																						
	<p><u>Consideration of wider alternatives:</u> This commitment is the result of a filtering process from an initial list of alternatives that were co-created in our RIIO-ED2 stakeholder workshops, in the category of ‘whole system approach to net zero’ under “Predict future changes and uptake of localised WPD future energy scenarios” and “Facilitate collaboration between local groups to deliver local energy plans”. The alternatives considered included:</p>																																						
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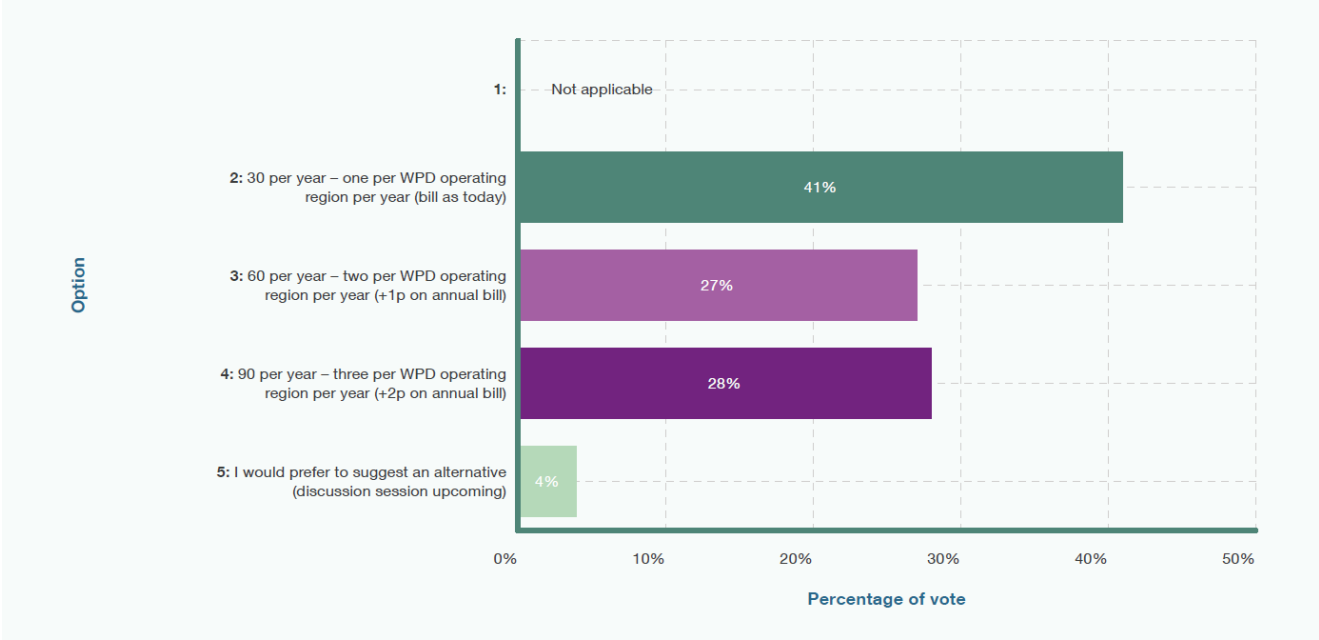
	e) Coordinate cross-agency initiatives to reduce demand and promote the use of flexibility services	Yes
	f) Lobby to become a statutory consultee on planning applications	No
	g) Aggregate local connections requests to facilitate, for example, district heating plans	No – licence condition restricts our ability to do this
	h) Work with LAs to identify prime locations on the network for delivering local, low carbon energy plans	Yes
	i) Make local plans that are based on delivering net zero	Yes
	j) Look for examples of best practice, including from other countries	Yes
	k) Provide capacity on the network to facilitate EVs	Yes
	l) Consider waste to energy and provide advice to local government	No – licence condition restricts our ability to do this
	m) Provide consultancy services for local energy groups	Yes
	n) Incentivise local energy production	Yes
	o) Lead on creating a joint taskforce comprised of industry, combined authority, LA, and government	Yes
	p) Consider heat pumps as part of local energy plans, including thermal storage options	Yes
	q) Create consensual partnerships between local groups	Yes
3. Costs are efficient and benefits of the actions plausibly outweigh the costs	<p>By engaging proactively with LAs, we will optimise the planning process, optimise costs, minimise risks and reinforce security of supply by accurately anticipating potential network constraints.</p> <p>The estimated cost for the delivery of this commitment is £2.25m. Indirect benefits for WPD’s customers are estimated at £8m, with a social value per customer of £4.85 (in a total of £38.8m for approximately 8m customers) and a total social value of £36.89m delivered over 10 years.</p> <p>These benefits have been derived from increased efficiency from a number of parties (BEIS, Ofgem, GDNs, developers, and regional bodies to name a few). Savings will be made (reduced data and processing costs and reduced consultancy fees incurred across both software and engineering advisory) through the introduction of a standard process, led by WPD.</p> <p>In a pilot study conducted to understand the impact of local area energy planning, and the relevant costs involved, Energy Systems Catapult found that the latest study in Bury (the most reflective of the expected costs of scaling) had a short term cost of £570k. This including a number of one-off costs and room for efficiencies. In the same report, Energy Systems Catapult anticipated that for scale-up across local areas in the UK, a structured process would have an average cost of between £100k and £250k.</p> <p>This places the benefit of a “structured process” – to be delivered by WPD – at £570k minus the top end of the estimate, £250k, at an average benefit of £320k per local area.</p> <p>We can conclude that the benefits of this commitment clearly outweigh its delivery costs.</p>	

4. Customers, as well as stakeholders, support the Business Plan	<p>As set out in detail in Annex 5, stakeholders strongly support this commitment.</p> <p>This commitment looks across the wider energy system to provide capacity for the future needs of our customers in the most efficient way. This is one of our eight CVP commitments and reflects our mission of delivering the best value for our customers, beyond WPD's obligations as a DNO.</p> <p>Overall there was wide agreement that more engagement is needed and that LAs and enterprise partnerships need to work more closely with WPD to deliver aligned energy plans and streamline the sharing of information. Stakeholders specifically raised the need to increase engagement to assess any gaps in EV charging infrastructure and mentioned having a local contact so they can see whether LA plans match those of WPD.</p> <p>At the Business Plan refinement phase, the majority of stakeholders (74%) favoured greater ambition and 53% favoured an annual contact with LAs. The Business Plan acceptance testing revealed that 79% of WPD's customers supported this commitment.</p>
5. Customers are not exposed to unacceptable risks	<p>If WPD under delivers against this commitment (for example, if deadlines are missed and WPD does not manage to engage all 130 LAs by the end of ED2), we will incur reputational penalties as part of the ODI.</p> <p>WPD has been engaging with all 130 LAs for both Business as Usual (BAU) engagement, as well as workshops specific to the RIIO-ED2 Business Plan. Given the experience and connections already in place, there is limited risk of not meeting the target set.</p>
6. Assurance undertaken	<p>WPD experience in this area has been demonstrated by previous collaboration with local authorities, as per project EPIC and VENICE.</p> <p>Our work in this area has been delivered through partnerships with organisations like Regen, who have helped create our "Connecting Community Energy" guide, and the Centre for Sustainable Energy (CSE) who helped develop a guide on Community-Based Network Innovation.</p> <p>This collaboration ensures we are always reaching for improved resources for our communities and provides assurance that our ambitions are sufficiently stretching.</p>

Commitment 8: Community energy engagement

<p>Actively support the expansion of green, renewable energy generation and help local communities to decarbonise and lower their bills, by connecting at least 30 community energy groups to the network each year. We will hold 60 community energy surgeries per year and providing a dedicated WPD community energy representative to assist with connection and flexibility offers.</p>																									
Justification criteria:	WPD action:																								
<p>Desired outcome - agreed with stakeholders (see Annex 5)</p>	<p>Community groups with less knowledge and expertise of the connections process receive tailored support to develop their schemes and connect to the network. This will increase their confidence and understanding of our processes, so that they find it easier to gain access to our network. This is not simply about the volume of engagements undertaken; WPD will ensure that these are of high quality, conducted by WPD staff with adequate skills and knowledge (see relevant strategy document for further details) and will survey stakeholders after these engagements to identify improvements and assess the overall efficacy of our actions.</p>																								
<p>1. Actions are appropriate for a DNO</p>	<p>As a DNO, WPD has a licence obligation to enable a fair and effective access to its network. Community energy schemes are a fundamental component of the shift to the decentralisation of energy resources, which will be critical to achieve net zero. The integration of distributed energy resources and LCTs require that potential connection applicants understand network connection processes and new flexibility products.</p> <p>WPD has the expertise required to ensure this understanding. It was clear from our stakeholders that they needed support to understand the opportunities associated with community energy schemes. We can assist in providing an understanding of process, timescales, technical considerations, consents/legal requirements and possible constraints involved with either making a single connection to the network in a particular area or a more strategic approach to decarbonisation across a region.</p> <p>This commitment supports the liaison with local energy communities and the execution of LAEPs together with LAs. To date we have successfully provided support to the communities and their representatives through accessible guides. Our 'Connecting Community Energy' guide is a 'how to' for any local energy group looking to develop its own renewable energy project and connect to our network. However, some organisations prefer to discuss matters in more detail. We are well placed to provide this support, in this case through the provision of community energy surgeries.</p>																								
<p>2. Considered alternative approaches (and options presented were sufficiently ambitious)</p>	<p><u>Consideration of wider alternatives:</u></p> <p>This commitment is the result of a filtering process from an initial list of alternatives that were created in our RIIO-ED2 stakeholder co-creation workshops, across two different topics: "Help local communities to achieve their net zero carbon emissions targets" and "Facilitate collaboration between local groups and to deliver energy plans". The alternatives are shown below:</p> <table border="1"> <thead> <tr> <th colspan="2">Topic: Help local communities to achieve their net zero carbon emissions targets</th></tr> <tr> <th>Stakeholder created actions</th><th>Included in WPD's Plan?</th></tr> </thead> <tbody> <tr> <td>a) Engage with LAs to support them to deliver on their net zero targets, sharing knowledge and information</td><td>Yes</td></tr> <tr> <td>b) Support communities to deliver local energy projects, including the provision of funding and advice</td><td>Yes</td></tr> <tr> <td>c) Take a leadership role in terms of education and communication</td><td>Yes</td></tr> <tr> <td>d) Support communities to identify key areas suitable for renewable energy generation</td><td>Yes</td></tr> <tr> <td>e) Encourage battery storage as part of the solution</td><td>Yes</td></tr> <tr> <td>f) Plan proactively for the impacts of climate change</td><td>Yes</td></tr> <tr> <td>g) Support schemes that retrofit insulation</td><td>No – beyond WPD's role</td></tr> <tr> <td>h) Work through trusted partners in the communities (e.g. LEAP groups)</td><td>Yes</td></tr> <tr> <td>i) Encourage entrepreneurs</td><td>No</td></tr> <tr> <td>j) Help reduce energy use</td><td>No</td></tr> </tbody> </table>	Topic: Help local communities to achieve their net zero carbon emissions targets		Stakeholder created actions	Included in WPD's Plan?	a) Engage with LAs to support them to deliver on their net zero targets, sharing knowledge and information	Yes	b) Support communities to deliver local energy projects, including the provision of funding and advice	Yes	c) Take a leadership role in terms of education and communication	Yes	d) Support communities to identify key areas suitable for renewable energy generation	Yes	e) Encourage battery storage as part of the solution	Yes	f) Plan proactively for the impacts of climate change	Yes	g) Support schemes that retrofit insulation	No – beyond WPD's role	h) Work through trusted partners in the communities (e.g. LEAP groups)	Yes	i) Encourage entrepreneurs	No	j) Help reduce energy use	No
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	k) Take a holistic, country-wide approach	Yes	
	l) Provide incentives and financial support for zero carbon energy products	No – beyond WPD's role	
	m) Drive changes to national planning and investment policy that support net zero	Yes	
	n) Create a clear engagement strategy that educates and gives guidance to communities reaching net zero	Yes	
	o) Work with government to create a national policy framework that will enable all local communities to reach net zero	Yes	
	p) Ensure that there is enough capacity in the network	Yes	
	q) Engage with commercial customers	Yes	
	r) Develop case studies: set up a trial village	Yes	
	s) Have more involvement with local plans at the drafting stage	Yes	
	t) Take a multi-level approach, working with regional stakeholders down to individuals	Yes	
	u) Collaborate with suppliers	Yes	
	v) Help to publicise a carbon calculator	Yes	
	w) Educate customers on reducing carbon footprint	Yes	
	x) Lobby government to decarbonise generation	No	
	y) Develop KPIs to measure the impact of your activities	Yes	
	Regarding the next topic, the alternatives considered are shown in the table below:		
	Topic: Facilitate collaboration between local groups to deliver local energy plans		
	Stakeholder created actions		Included in WPD's Plan?
	a) Formalise an engagement plan with local authorities and developers on net zero targets and planning	Yes	
	b) Provide key data: illustrative constraint information, interactive capacity maps, database of local energy groups and networks	Yes	
c) Facilitate better collaboration between developers on new connections	Yes		
d) Provide support and leadership to achieve net zero	Yes		
e) Coordinate cross-agency initiatives to reduce demand and promote the use of flexibility services	No		
f) Lobby to become a statutory consultee on planning applications	No		
g) Aggregate local connections requests to facilitate, for example, district heating plans	No – Licence condition restricts this		
h) Work with local authorities to identify prime locations on the network for delivering local, low carbon energy plans	Yes		
i) Make local plans that are based on delivering net zero	Yes		
j) Look for examples of best practice, including from other countries	Yes		
k) Provide capacity on the network to facilitate EVs	Yes		
l) Consider waste to energy and provide advice to local government	No – beyond WPD's role		
m) Provide consultancy services for local energy groups	Yes		
n) Incentivise local energy production	Yes		
o) Lead on creating a joint taskforce comprised of industry, combined authority, LA, and government	Yes		
p) Make a target to engage hard-to-reach energy groups	No		
q) Consider heat pumps as part of local energy plans, including thermal storage options	Yes		
r) Create consensual partnerships between local groups	Yes		
s) Maintain an emphasis on affordability, including for 'eco-flex' customers (working poor)	Yes		
t) Formalise an engagement plan with local authorities and developers on net zero targets and planning	Yes		
u) Provide key data: illustrative constraint information, interactive capacity maps, database of local energy groups and networks	Yes		
WPD will provide a dedicated WPD community energy representative to assist with connection and flexibility offers, and will seek the creation of consensual partnership between local groups via the realisation of this commitment.			
3. Costs are efficient and benefits of the actions plausibly outweigh the costs	The estimated cost of Establishing Community Energy Engineers is £1.26 million in RII0-ED2. This is one of WPD's Customer Value Propositions and is therefore subject to a range of cost benefit considerations mandated as part of that process. By engaging proactively with community energy groups, we will facilitate the planning process and optimise network reinforcements, resulting in an overall benefit for communities and WPD customers in a region. This benefit will consist of both an increase in connected LCTs and the		

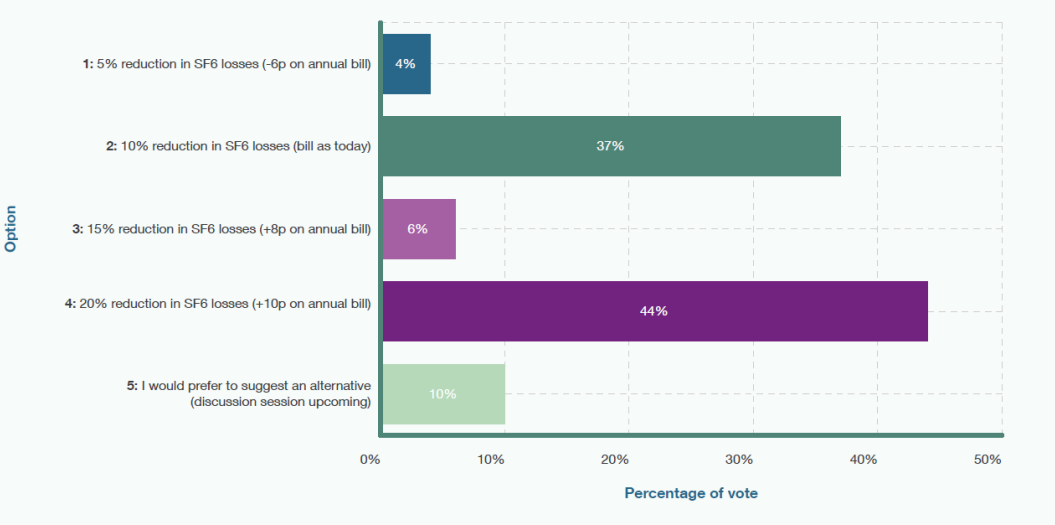
	<p>associated benefits (savings for local communities and carbon benefits for the UK as a whole) and reduced ‘frictional’ costs by minimising the number of unsuccessful attempts at developing and implementing community energy schemes (time and resource wastage – both on WPD’s side, and that of the community groups). The community groups’ benefits will consist of:</p> <ul style="list-style-type: none"> Energy efficiency savings from installed technologies. Increased value of community shares of successful installations. Increased local expenditure that benefits the community. Jobs created. <p>Our current research estimates the positive benefit of the four bullet points above at £164k per year, per MW installed. Given the scale of WPD’s current community installed capacity (100MW), we are expecting significant benefits by increasing the ease by which groups can get connected. Based on these benefits we are confident that the benefits far outweigh the costs of running community energy surgeries.</p>												
<p>4. Customers, as well as stakeholders, support the Business Plan</p>	<p>As part of our consultation, our stakeholders were asked how often we should hold surgeries. We gave our customers four options, and the results are shown below:</p>  <table border="1"> <thead> <tr> <th>Option</th> <th>Percentage of vote</th> </tr> </thead> <tbody> <tr> <td>1: Not applicable</td> <td>0%</td> </tr> <tr> <td>2: 30 per year – one per WPD operating region per year (bill as today)</td> <td>41%</td> </tr> <tr> <td>3: 60 per year – two per WPD operating region per year (+1p on annual bill)</td> <td>27%</td> </tr> <tr> <td>4: 90 per year – three per WPD operating region per year (+2p on annual bill)</td> <td>28%</td> </tr> <tr> <td>5: I would prefer to suggest an alternative (discussion session upcoming)</td> <td>4%</td> </tr> </tbody> </table> <p>While the most supported individual option was to deliver 30 events per year (41%), a greater proportion of respondents wanted greater ambition (55%). There was no consensus on the precise level, so WPD has picked the mid-point option of ‘60 events a year’. In addition, there was particularly high support for introducing local WPD community energy representatives (97%) – working collaboratively to provide tailored connection and flexibility offers.</p> <p>The Business Plan acceptance testing revealed that a strong majority of our customers (78%) supported this commitment.</p>	Option	Percentage of vote	1: Not applicable	0%	2: 30 per year – one per WPD operating region per year (bill as today)	41%	3: 60 per year – two per WPD operating region per year (+1p on annual bill)	27%	4: 90 per year – three per WPD operating region per year (+2p on annual bill)	28%	5: I would prefer to suggest an alternative (discussion session upcoming)	4%
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5. Customers are not exposed to unacceptable risks	<p>If WPD under delivers against this commitment, we will incur reputational penalties as part of the ODI.</p> <p>This commitment is underpinned by a proactive approach by WPD in reaching out to communities and customers, minimising risks of fuel poverty and lack of awareness of LCTs.</p> <p>WPD has significant experience in delivering projects in partnership with energy communities, with proven benefits and can therefore minimise any risks faced.</p>
6. Assurance undertaken	<p>WPD has carried out several community engagement initiatives since 2014, as mentioned in the WPD Communities Strategy paper.</p> <p>Also, WPD's experience in this area has been demonstrated by previous collaboration with several energy communities, as demonstrated by the innovation project Community Energy Action. Our work in this area has been delivered through partnerships with organisations like Regen, who have helped create our "Connecting Community Energy" guide, and the CSE who helped develop a guide on Community-Based Network Innovation.</p> <p>This collaboration ensures we are always reaching for improved resources for our communities and provides assurance that our ambitions are sufficiently stretching.</p>

Commitment 12: Leakage of SF₆ gas

Significantly reduce our impact on climate change by delivering a 20% reduction in SF ₆ losses and drive industry partners to develop technological alternatives to reduce overall volumes of SF ₆ on the system.																							
Justification criteria:		WPD action:																					
Desired outcome - agreed with stakeholders (see Annex 5)		Significantly improve WPD's carbon footprint by reducing the risk of leaks from environmentally harmful gases from WPD's equipment.																					
1. Actions are appropriate for a DNO		This commitment addresses the direct impact of WPD's operations on the environment. SF ₆ is a highly potent Greenhouse Gas but it is currently integral to the operation of the electricity network, particularly at high voltages. Leakages of SF ₆ gas can therefore cause a significant environmental impact, and at 23,000 times the potency of CO ₂ , losses have a huge potential global warming impact. Stakeholders have strongly urged WPD to take action to mitigate our impact on the environment, with this issue consistently rated as a high priority at every overarching stakeholder event.																					
2. Considered alternative approaches (and options presented were sufficiently ambitious)		<p><u>Why did we offer these options / evidence of appropriate ambition:</u></p> <p>In RIIO-ED1 we are committed to deliver a major 17% reduction in SF₆ losses over 8 years. We have actually been able to go significantly further and surpass this. The original improvement target was to achieve a leakage rate of 0.37% by the end of the RIIO-ED1 period, but as of 2021 we had achieved a leakage rate of 0.11%. While it is vital to our stakeholders that we continue to drive further reductions, given that leakage rates are now so low there are diminishing returns and therefore a limit of the scale on further improvement that can be delivered – hence offering customers options up to 20% improvement, beyond which improvements may not be practically deliverable. For example, the scale of further improvement beyond this level will be dependent on the lack of SF₆ alternatives at certain voltage levels. We must therefore select further improvement target options for RIIO-ED2 that are realistically deliverable in light of this. In addition, there has to be a cost/benefit consideration of how quickly all SF₆ should be removed from the system as this will result in expensive asset replacement costs for customers, switching out fully-functional switchgear (the condition of which is posing a very small risk of leakage) well ahead of its projected lifespan.</p> <p>Given that the profile of leakage is tailing off due to years of investment and the major improvements delivered in RIIO-ED1, given that the improvement was 17% over 8 years, by offering commitment options for stakeholders that go as far as a further 20% reduction over the 5 year RIIO-ED2 period, WPD is demonstrating a significant increase in ambition and activity to deliver this. In addition, we offered stakeholders the option to suggest entirely different alternatives and/or to select a target somewhere between the options initially offered for stakeholder consideration.</p> <table border="1"> <thead> <tr> <th></th><th>Option 1:</th><th>Option 2:</th><th>Option 3:</th><th>Option 4:</th><th>Option 5:</th></tr> </thead> <tbody> <tr> <td>Ambition level:</td><td>5% reduction in SF₆ losses</td><td>10% reduction</td><td>15% reduction</td><td>20% reduction</td><td>Even further ambition / an alternative (uncapped)</td></tr> <tr> <td>Bill impact:</td><td>-6p</td><td>No bill impact</td><td>+8p</td><td>+10p</td><td>-</td></tr> </tbody> </table> <p>As Supplementary Annex SA-05 outlines, a clear majority of stakeholders wanted to see the maximum level of ambition of option 4. 10% of stakeholders selected option 5 to request an alternative approach, which was relatively high compared to other commitments. However, when probed most just sought greater clarity to understand the scale of the problem. Therefore this indicated that stakeholders considered the options presented to be in the correct range and sufficiently ambitious.</p>					Option 1:	Option 2:	Option 3:	Option 4:	Option 5:	Ambition level:	5% reduction in SF ₆ losses	10% reduction	15% reduction	20% reduction	Even further ambition / an alternative (uncapped)	Bill impact:	-6p	No bill impact	+8p	+10p	-
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	<p><u>Consideration of wider alternatives:</u> WPD was encouraged to work with industry partners to develop ways to eliminate SF₆ in the future, which is included as part of WPD's wider commitments in this area.</p> <p>Another factor in the rate of SF₆ losses is the operational trade-offs required between environment versus network performance data, whereby avoiding the risk of prolonged outages may result in allowing leaks to continue slightly longer in order to maintain customer supplies. The thresholds for decision-making will be reviewed and updated in RIIO-ED2 to expedite the replacement of leaking equipment and maintain supplies via other means (e.g. temporary generation/battery power).</p> <p>In addition, as key enablers to this overarching core commitment there are a number of ambitious new actions, as well as stretches to existing performance, that WPD has committed to deliver. WPD's co-creation events resulted in a large number of unprompted stakeholder suggestions in relation to this area. Of these, the vast majority are wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. For example:</p> <table border="1"> <thead> <tr> <th colspan="2">Topic: Harmful leaks from WPD equipment</th></tr> <tr> <th>Stakeholder created actions</th><th>Included in WPD's Plan?</th></tr> </thead> <tbody> <tr> <td>a) Eliminate the use of SF₆ and carry out research to find alternatives</td><td>Yes</td></tr> <tr> <td>b) Create a risk assessment of assets containing SF₆ and replace assets susceptible to leaks</td><td>Yes</td></tr> <tr> <td>c) Set a target for reducing harmful leaks and monitor the environmental impacts</td><td>Yes</td></tr> <tr> <td>d) Reduce use of oils</td><td>Yes</td></tr> <tr> <td>e) Set clear targets and adopt best practice in terms of regularly inspecting and replacing equipment</td><td>Yes</td></tr> <tr> <td>f) Look at examples of best practice from other sectors</td><td>Yes</td></tr> <tr> <td>g) Increase the efficiency of transmission</td><td>Yes</td></tr> <tr> <td>h) Encourage innovation around heat capturing technologies</td><td>Yes</td></tr> <tr> <td>i) Focus on innovation to replace harmful materials</td><td>Yes</td></tr> <tr> <td>j) Increased replacement of assets</td><td>Yes</td></tr> </tbody> </table>	Topic: Harmful leaks from WPD equipment		Stakeholder created actions	Included in WPD's Plan?	a) Eliminate the use of SF ₆ and carry out research to find alternatives	Yes	b) Create a risk assessment of assets containing SF ₆ and replace assets susceptible to leaks	Yes	c) Set a target for reducing harmful leaks and monitor the environmental impacts	Yes	d) Reduce use of oils	Yes	e) Set clear targets and adopt best practice in terms of regularly inspecting and replacing equipment	Yes	f) Look at examples of best practice from other sectors	Yes	g) Increase the efficiency of transmission	Yes	h) Encourage innovation around heat capturing technologies	Yes	i) Focus on innovation to replace harmful materials	Yes	j) Increased replacement of assets	Yes
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3. Costs are efficient and benefits of the actions plausibly outweigh the costs	<p>We will significantly improve WPD's carbon footprint by reducing the risk of leaks from environmentally harmful gases from WPD's equipment. Targeted asset replacement via early leakage detection and prioritising assets with the poorest health condition will ensure the most efficient spend for customers and deliver actions that deliver the greatest overall environmental benefit. Were WPD to seek to bring forward the replacement of assets containing SF₆ (that are currently in good condition and operating effectively) in the interests of removing potential environmental impact risk this could actually cause negative environmental impacts. For example, we must consider the embodied carbon associated with the manufacturing, transport and use of concrete in the asset replacement activity required for large switchgear, which would be caused as a result of bringing forward the asset replacement of non-leaking equipment.</p> <p>Customers place significant value on the achievement of this outcome, with a mean value of £1.26 per customer, as revealed by WPD's willingness to pay research (see Supplementary Annex SA-05). The total expenditure for this commitment per year equates to 10p per customer, which is outstripped significantly by the value placed on it by customers.</p>																								
4. Customers, as well as stakeholders, support the Business Plan	<p>As set out in detail in Annex 5, stakeholders place a very high priority on the importance of reducing leaks from SF₆ and seeking to develop technological alternatives that will enable the eventual total removal of SF₆ for the electricity system.</p>																								

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<p>5. Customers are not exposed to unacceptable risks</p>	<p>We have a very strong track record of delivering improvements in this area and significantly outperforming our targets. While this is an ambitious commitment and an increase from RIIO-ED1, customers can have confidence that this target and the activity volumes required to deliver it are highly achievable as WPD's environmental and network services teams are therefore well placed to understand the work involved in delivery and to meet the ambitious targets set.</p> <p>If WPD under delivers against this commitment, we will incur reputational penalties as part of the ODI.</p> <p>In addition, achieving a reduction in SF₆ is very high on the environment regulator's radar; therefore any under delivery against this commitment would bring significant reputational risk and would bring legal compliance issues regarding pollution prevention and control legislation.</p> <p>Even in the unlikely event of under delivery WPD's actions in this area are a vital contribution to the overall achievement of driving net zero across our own operations and meeting the Science Based Target of 1.5°C to limit the climate impact of our activities, for which there is very strong stakeholder support and high customer value associated with actions to deliver this.</p>												
<p>6. Assurance undertaken</p>	<p>WPD's performance in this area will be presented and externally audited as part of the ISO14001 Environmental Management accreditation standard each year. Ofgem requires the annual publication of an environment report as part of the Environmental Action Plan to enable</p>												

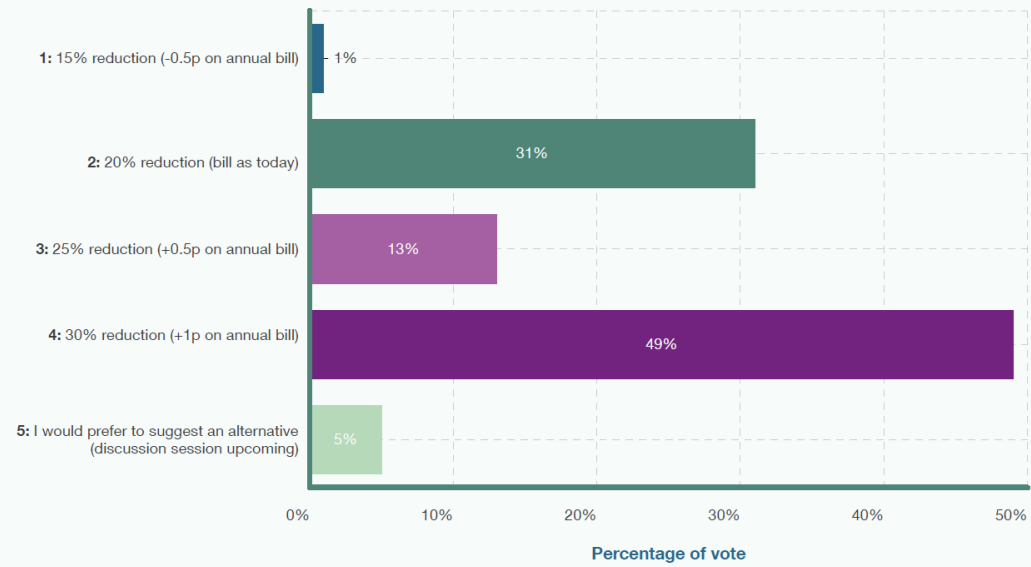
	<p>comparisons of delivery outcomes between DNOs. In addition, this commitment is in line the scope of the ESG rating and assessment that WPD will voluntarily undergo each year.</p> <p>WPD's published BCF data, the methodology, assumptions, and calculations have been verified and data assured for accuracy and compliance with various standards – including the Greenhouse Gas (GHG) reporting protocol and ISO14064-1 (part of the wider ISO14001 assessment).</p> <p>WPD's commitment in this area is also in line with annual company environmental reporting required as part of UK legislation, via the Streamlined Energy Carbon Reporting regulations (covering scope 1 and scope 2 company emissions).</p>
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Commitment 13: Waste sent to landfill

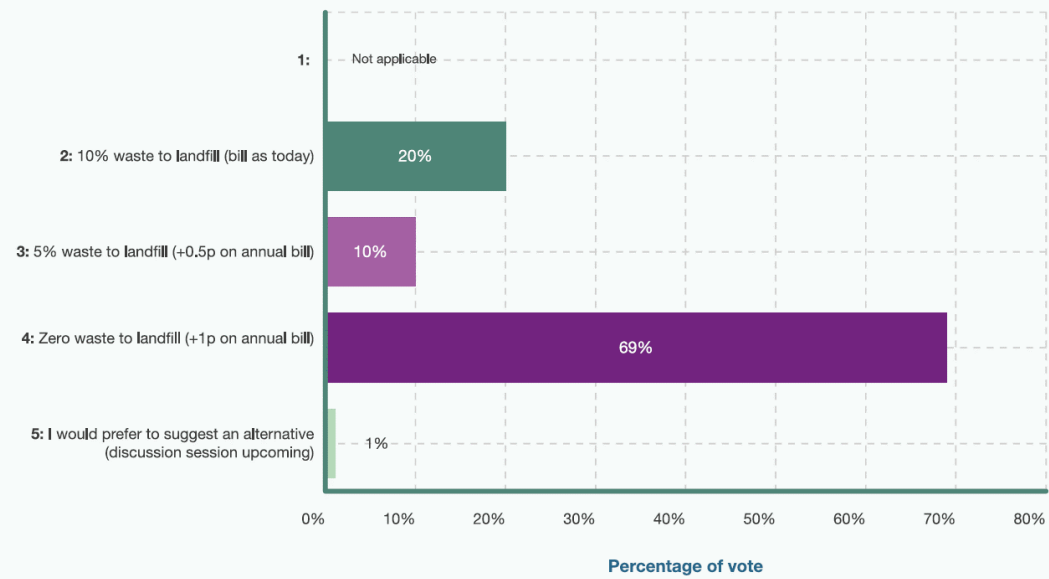
Significantly reduce the environmental impact of our operations by achieving zero waste to landfill by 2028 (excluding hazardous waste) and delivering an overall 30% reduction in tonnage waste produced.																																									
Justification criteria:	WPD action:																																								
Desired outcome - agreed with stakeholders (see Annex 5)	Ensure our service for customers are delivered in an environmentally responsible way, dramatically reducing the carbon impact of our operations. By removing our use of landfill, we will also remove the negative environmental impact of land waste disposal including inherent emissions associated with this process (e.g. methane). Additional benefits include improving our cost efficiency by reducing the volumes of single use materials including plastics, therefore maximising reuse and in so doing, reducing overall waste.																																								
1. Actions are appropriate for a DNO	<p>This commitment addresses the direct impact of WPD's operations on the environment. Stakeholders have strongly urged WPD to take action to mitigate our impact on the environment, with this issue consistently rated as a high priority at every overarching stakeholder event.</p> <p>Direct waste produced by our operations can also cause associated environmental issues when sent to landfill including potential land contamination. The cost of waste disposal is ultimately funded as part of the price control and therefore any reduction in the overall volume of waste produced can help to reduce costs for customer associated with this area of our business. By introducing a more sustainable use of resources not only aid the environment but also drives efficiency via reuse of materials. WPD is also well placed to affect real positive change within our wider supply chain.</p>																																								
2. Considered alternative approaches (and options presented were sufficiently ambitious)	<p><u>Why did we offer these options / evidence of appropriate ambition:</u></p> <p>In relation to waste reduction we offered options for stakeholders up the maximum of achieving zero waste to landfill. This is a believable target as in RIIO-ED1 we have achieved dramatic reductions to date including some licence areas achieving zero landfill waste for periods of time, therefore we have confidence we can achieve this business-wide on an enduring basis.</p> <p>In relation to total tonnage of waste produced, there is inevitably a cap in how far this can be reduced as some waste is inevitable as a result of our core operations, work types and activity volumes (although we are driving this down as much as can). We conducted modelling ahead of devising the options for stakeholders to consider and a maximum achievement of 30% is modelled on specific actions, particularly in relation to packaging and arrangements with suppliers. We therefore have high confidence it is a very stretching, but achievable target. In addition, we offered stakeholders the option to suggest entirely different alternatives and/or even greater levels of ambition.</p> <table border="1"> <thead> <tr> <th></th><th>Option 1:</th><th>Option 2:</th><th>Option 3:</th><th>Option 4:</th><th>Option 5:</th></tr> </thead> <tbody> <tr> <td>Ambition level:</td><td>15% reduction in tonnage of waste per £ total business expenditure</td><td>20% reduction</td><td>25% reduction</td><td>30% reduction</td><td>Even further ambition / an alternative (uncapped)</td></tr> <tr> <td>Bill impact:</td><td>-0.5p</td><td>No bill impact</td><td>+0.5p</td><td>+1p</td><td>-</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th></th><th></th><th>10% of waste sent to landfill</th><th>5% of waste sent to landfill</th><th>Zero waste sent to landfill</th><th>Even further ambition / an alternative (uncapped)</th></tr> </thead> <tbody> <tr> <td>Ambition level:</td><td>-</td><td></td><td></td><td></td><td></td></tr> <tr> <td>Bill impact:</td><td>-</td><td>No bill impact</td><td>+0.5p</td><td>+1p</td><td>-</td></tr> </tbody> </table> <p><u>Consideration of wider alternatives:</u></p> <p>In relation to the disposal of hazardous waste we are working with our supply chain and industry colleagues to develop alternative disposal methods, but at present these do not yet exist.</p>						Option 1:	Option 2:	Option 3:	Option 4:	Option 5:	Ambition level:	15% reduction in tonnage of waste per £ total business expenditure	20% reduction	25% reduction	30% reduction	Even further ambition / an alternative (uncapped)	Bill impact:	-0.5p	No bill impact	+0.5p	+1p	-			10% of waste sent to landfill	5% of waste sent to landfill	Zero waste sent to landfill	Even further ambition / an alternative (uncapped)	Ambition level:	-					Bill impact:	-	No bill impact	+0.5p	+1p	-
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	<p>As key enablers to this overarching core commitment there are a number of ambitious new actions, as well as stretches to existing performance, that WPD has committed to deliver. WPD's co-creation events resulted in a large number of unprompted stakeholder suggestions in relation to this area. Of these, the vast majority are wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. For example:</p> <table border="1"> <thead> <tr> <th colspan="2">Topic: Harmful leaks from WPD equipment</th></tr> <tr> <th>Stakeholder created actions</th><th>Included in WPD's Plan?</th></tr> </thead> <tbody> <tr><td>a) Focus on supporting a circular economy and ensure that your supply chain partners do the same</td><td>Yes</td></tr> <tr><td>b) Reduce the amount of waste you generate and set a 'zero waste to landfill' target date (e.g. 2025)</td><td>Yes</td></tr> <tr><td>c) Reduce, reuse, and recycle all materials and assets, including cables</td><td>Yes</td></tr> <tr><td>d) Produce and implement a waste hierarchy model with clearly defined targets</td><td>Yes</td></tr> <tr><td>e) Incentivise staff to reduce their use of skips</td><td>Yes</td></tr> <tr><td>f) Use recyclable materials where possible, e.g. PPE and copper</td><td>Yes</td></tr> <tr><td>g) Get involved in local initiatives</td><td>Yes</td></tr> <tr><td>h) Where possible, repair IT equipment rather than buying new</td><td>Yes</td></tr> <tr><td>i) Exceed all current recycling standards</td><td>Yes</td></tr> <tr><td>j) Link with community groups, including when disposing of wood from felling / lopping as this can be put to use</td><td rowspan="2">Partial - we will investigate opportunities with our waste contractors. There may be possible legal compliance issues which would need to be resolved.</td></tr> <tr><td>k) Donate old materials to groups and organisations who may be able to put them to use</td></tr> <tr><td>l) Consider all waste, not just plastic</td><td>Yes</td></tr> <tr><td>m) Ensure that the land you own is used sustainably</td><td>Yes</td></tr> <tr><td>n) Research / invest in waste to energy plants</td><td>No - confusion on WPD's role</td></tr> <tr><td>o) Focus on recycling initiatives for EV batteries</td><td>Yes</td></tr> </tbody> </table> <p>In addition, there were 9 recommended initiatives (that have been adopted in our RIIO-ED2 Business Plan) specifically in relation to reducing plastic use.</p>	Topic: Harmful leaks from WPD equipment		Stakeholder created actions	Included in WPD's Plan?	a) Focus on supporting a circular economy and ensure that your supply chain partners do the same	Yes	b) Reduce the amount of waste you generate and set a 'zero waste to landfill' target date (e.g. 2025)	Yes	c) Reduce, reuse, and recycle all materials and assets, including cables	Yes	d) Produce and implement a waste hierarchy model with clearly defined targets	Yes	e) Incentivise staff to reduce their use of skips	Yes	f) Use recyclable materials where possible, e.g. PPE and copper	Yes	g) Get involved in local initiatives	Yes	h) Where possible, repair IT equipment rather than buying new	Yes	i) Exceed all current recycling standards	Yes	j) Link with community groups, including when disposing of wood from felling / lopping as this can be put to use	Partial - we will investigate opportunities with our waste contractors. There may be possible legal compliance issues which would need to be resolved.	k) Donate old materials to groups and organisations who may be able to put them to use	l) Consider all waste, not just plastic	Yes	m) Ensure that the land you own is used sustainably	Yes	n) Research / invest in waste to energy plants	No - confusion on WPD's role	o) Focus on recycling initiatives for EV batteries	Yes
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3. Costs are efficient and benefits of the actions plausibly outweigh the costs	<p>WPD were able to offer a further significant reduction in waste to landfill beyond the levels achieved in RIIO-ED1 at minimal cost increase (£150k per annum) and therefore minimal bill impact. This is therefore a measure of the ongoing efficiency of our costs insofar as we would be able to deliver increased volumes of activities with very little increased cost for customers.</p> <p>As outlined in relation to WPD's core commitment to achieve net zero in our overall BCF by 2028, customers place significant value on the achievement of a dramatic reduction in WPD's BCF, with a mean value of £1.60 per customer, as revealed by WPD's willingness to pay research (see Supplementary Annex SA-05). The total expenditure for this commitment per year equates to 2p per customer, which is outstripped significantly by the value placed on it by customers.</p>																																	
4. Customers, as well as stakeholders, support the Business Plan	<p>As Supplementary Annex SA-05 outlines, a clear majority of stakeholders wanted to see the maximum level of ambition, with a combined 62% of stakeholders wanting to greater ambition from option 2 (WPD's initial minded-to position) in relation to waste reduction. Separately 69% of stakeholders favoured zero waste to landfill. Across the two questions only 5% selected option 5 to go even further, indicating that stakeholders considered the options presented to be in the correct range and sufficiently ambitious.</p>																																	

Option



Option

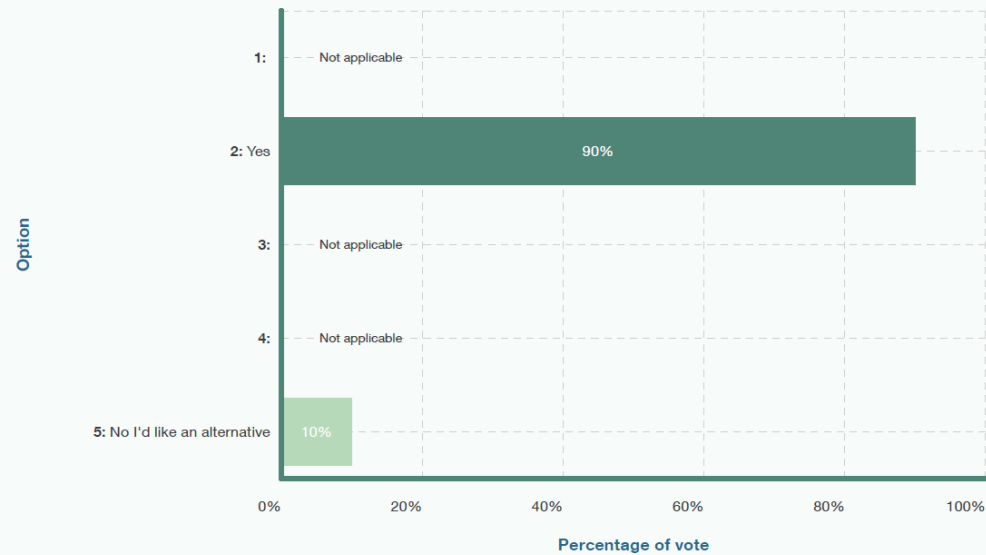


	<p>In addition to the very high levels of stakeholder support for this commitment, 82% of customers supported this initiative as part of WPD's acceptance testing.</p>
5. Customers are not exposed to unacceptable risks	<p>We have a very strong track record of delivering improvements in this area, including significantly outperforming our RIIO-ED1 targets. While this is an ambitious commitment and an increase from RIIO-ED1, customers can have confidence that this target and the activity volumes required to deliver it are highly achievable as WPD's environmental and network services teams are therefore well placed to understand the work involved in delivery and to meet the ambitious targets set.</p> <p>If WPD under delivers against this commitment, we will incur reputational penalties as part of the ODI. Over and above annual reporting to Ofgem, WPD is required to report performance in this area to the Environment Agency in England and Natural Resources Wales to evidence our compliance with environmental standards and legislation. There would therefore be significant reputational risk in the event of under delivery and potential enforcement action were we to be in breach of legislation. In addition, achieving a reduction in waste is very high on the Welsh Government's environmental agenda; therefore any under delivery against this commitment would bring further reputational risk and political pressure regarding waste prevention and control legislation.</p> <p>In a further step to minimise risk to customers of funding under delivery, we currently have very close working relationship with our waste contractors who are critical to the success of this initiative, and we will include contractual penalties to mitigate against risk of under delivery within our supply chain.</p>
6. Assurance undertaken	<p>WPD's performance in this area will be presented and externally audited as part of the ISO14001 Environmental Management accreditation standard each year. Ofgem requires the annual publication of an environment report as part of the Environmental Action Plan to enable comparisons of delivery outcomes between DNOs. In addition, this commitment is in line the scope of the ESG rating and assessment that WPD will voluntarily undergo each year.</p> <p>WPD's published BCF data, the methodology, assumptions, and calculations have been verified and data assured for accuracy and compliance with various standards – including the Greenhouse Gas (GHG) reporting protocol and ISO14064-1 (part of the wider ISO14001 assessment).</p> <p>WPD's commitment in this area is also in line with annual company environmental reporting required as part of UK legislation, via the Streamlined Energy Carbon Reporting regulations (covering scope 1 and scope 2 company emissions).</p>

Commitment 16: Innovation driving efficiency

Keep bills for customers low by delivering an additional stretch efficiency saving of £95 million through RIIO-ED2 (on top of £723 million of efficiencies already included in the plan) by utilising innovation to improve our processes and show a positive carbon impact.	
Justification criteria:	WPD action:
Desired outcome - agreed with stakeholders (see Annex 5)	Ensure WPD pursues continual innovation across its full range of processes and successful innovation is quickly rolled out across the business to improve day-to-day operations to improve WPD's efficiency and overall quality of service for customers.
1. Actions are appropriate for a DNO	<p>WPD has been very active in carrying out innovation work for more than 10 years. This has led to the development of a number of new processes and ways of managing the network that are now incorporated within our Business as Usual activities. In many cases, innovation projects have contributed to the evolution of these new processes.</p> <p>We want to ensure that the innovation work that we carry out is seeking to provide a benefit or enhancement. For this reason, we carry out a cost benefit assessment to identify the potential benefits of each innovation project. This may be a bespoke benefit arising from the project or a benefit that contributes to a wider innovation challenge.</p> <p>WPD is focused on maintaining and improving the performance of our network. We aim to explore every possibility to maintain asset health and to promote operational excellence.</p>
2. Considered alternative approaches (and options presented were sufficiently ambitious)	<p>The full justification for these efficiencies and how they have been arrived at can be found in WPD's 'Destination net zero: Business Innovation and Efficiency Strategy.</p> <p><u>Why did we offer these options / evidence of appropriate ambition:</u> Several stakeholders praised WPD for being the best DNO for innovation and flagged that trying to speed up the process of innovation trials into business as usual is really important as there is often fatigue at the end of projects and it's essential that key successes are rolled out widely across WPD's operations to achieve maximum benefit.</p> <p>We want to ensure that the innovation work that we carry out is seeking to provide a benefit or enhancement. For this reason, we decided to specify that each innovation carry out a cost benefit assessment to identify the potential benefits of each project. This may be a bespoke benefit arising from the project or a benefit that contributes to a wider innovation challenge. We asked our stakeholders about carrying out a cost benefit assessment and implementing the resulting innovation into business practice, with the results below:</p>

Commitment : For each innovation project we will undertake a cost benefit assessment and implement into business practice to improve efficiency and effectiveness of assets, operations and customer service



The results of asking this question encouraged us to add a specific savings target, through innovation projects that have undergone a cost benefit assessment.

Consideration of wider alternatives:

As a key enabler to this overarching commitment, innovation received more than 100 stakeholder suggested options, mostly focusing on the specific approaches that WPD could consider relating to concepts such as data, forecasting, low carbon technology, etc.

Several suggestions included activities that WPD already undertakes, such as “Keep funding innovation projects and share case studies of best examples”, and “Work with manufacturers involved with innovation to help customers use energy flexibly”, but no specific commitments were recorded related to efficiency for our first version of the Business Plan.

Following further consultation with stakeholders on the draft Business Plan, efficiency was identified as a clear area where a commitment should be added.

3. Costs are efficient and benefits of the actions

We want to ensure that the innovation work is always delivering a cost benefit and/or a carbon benefit. For this reason we have embedded the cost benefit assessment into this commitment, to identify all potential benefits of the innovation projects. This may be a bespoke benefit arising from the project, or a benefit that contributes to a wider innovation challenge.

plausibly outweigh the costs	As written, WPD's objective is that this commitment will lead to the realisation of £95 million of savings in business efficiencies, far outweighing the cost of the initial innovation activities and undertaking the cost benefit assessments.
4. Customers, as well as stakeholders, support the Business Plan	<p>Our stakeholders felt that a commitment on efficiency was important but that we needed to show the extent of the savings this efficiency will lead to throughout RIIO-ED2. We have since reworded the commitment to specify a saving of £95 million.</p> <p>This commitment was not included in our first draft Business Plan but was added as a new core commitment, following consultation with our stakeholders who felt we should include a core commitment on efficiency. In our second draft Business Plan, we proposed a new core commitment to deliver service improvement, driven by business efficiencies, to ensure customers saved money on their bills. In the consultation, customers were asked if they were happy with this commitment.</p> <p>95% supported the commitment to ensure a positive carbon impact for every innovation scheme. Stakeholders stated that decisions regarding innovation projects should not be based solely on cost benefits, but also the consideration of the environmental and carbon reductions they could achieve. Stakeholders accepted that in general there may be a need for costs to increase in order to deliver on the UK's net zero aspirations. However, across several commitments, stakeholders sought clarity on how the actions we take will improve the efficiency of our operations. They therefore wanted assurances that our first priority will always be to pursue efficiencies and innovative approaches to achieve more for less cost, and therefore any increases in customer bills would only be necessary as a last resort.</p> <p>The Business Plan Acceptance testing revealed that a strong majority of our customers (85%) supported this commitment.</p>
5. Customers are not exposed to unacceptable risks	<p>If WPD under delivers against this commitment, we will incur reputational penalties as part of the ODI.</p> <p>We realise that the implementation of innovation project into Business as Usual activities may be improved, given that there have been signs of fatigue in the end of innovation projects. As internal communication in WPD is essential, this commitment will be underpinned by the nomination of a senior project sponsor that will be responsible for the successful follow up and implementation of innovation projects that will drive efficiencies. This senior sponsor will ensure there are no unacceptable risks to WPD's delivery.</p>
6. Assurance undertaken	<p>WPD experience in this area has been demonstrated via the realisation of more than 50 innovation projects funded via Ofgem's Innovation incentives during RIIO-ED1.</p> <p>This success has been built on the strong internal innovation framework, based on internationally recognised project management methodologies (PRINCE2). This framework is documented within our Project Governance Guidelines, ensuring that our team consistently follow best practice in all projects.</p> <p>Lastly, to ensure that our innovation work provides solutions to Whole System challenges, we have strengthened our links with the water and rail industries, as well as international DNOs who are leading the industry changes in their countries. We believe that close collaboration between industry leaders internationally is the only way to effectively address global issues such as decarbonisation.</p>

Commitment 20: Priority Services Register (PSR) reach

Expand the reach of our Priority Services Register to at least 75% of total eligible customers and 80% of customers with critical medical dependencies to ensure those in greatest need receive targeted support services. This will include registering at least 50,000 additional hard-to-reach customers each year.	
Justification criteria:	WPD action:
Desired outcome - agreed with stakeholders (see Annex 5)	Customers with the most serious vulnerabilities are proactively identified and offered support.
1. Actions are appropriate for a DNO	<p>As a Licenced DNO, WPD shall maintain a PSR. Eligible PSR Customers are Domestic Customers who are either of pensionable age, disabled, chronically sick or live with children aged under 5, or due to otherwise being in a vulnerable situation, in need of additional services related to their access, safety and communication needs. Key hard-to-reach groups include customers with the most serious vulnerabilities, such as visual or hearing impaired or with medical dependencies.</p> <p>Ofgem's RIIO-ED2 Business Plans Guidance sets out baseline expectations for vulnerability strategies under four key principles: support consumers in vulnerable situations, maximise opportunities to identify consumers in vulnerable situations, understand new forms of vulnerability and embed the approach to protect the interests of consumers in vulnerable situations. The RIIO-ED2 Business Plan guidance requests networks to submit a Vulnerability Strategy, establishing the baseline for our support to vulnerable and fuel poor customers. It must address three primary areas of focus: vulnerability during a loss of supply; being in, or at risk of, fuel poverty; and the risk of being left behind by the energy system transition towards net zero.</p> <p>The core focus of the PSR must always be to protect the most vulnerable in our region against the risks associated with a power cut. To provide bespoke support for customers and increase the reach of our programme, we must locate the hardest to reach and most in need, establishing effective, trusted contact through a single point and continually improve the accuracy of the data we hold. As a DNO, WPD is uniquely positioned to deliver this commitment. WPD has a licence obligation to maintain the PSR and it can be used to improve the lives of 50,000 hard-to-reach customers. WPD has a long experience in this space, working with hundreds of partners to identify and register vulnerable customers. WPD's consumer vulnerability data mapping enables us to see where potentially high volumes of vulnerability align with gaps in our PSR take up. As part of our strategy, we will reach out to trusted local agencies which can help to extend our support to these areas, ensuring that more comprehensive coverage.</p> <p>In addition, the PSR will increasingly be a crucial tool to enable wider, bespoke support to customers, particularly in relation to the smart energy transition. WPD owns and constantly seeks to improve relations with vulnerable and fuel poor customers. Vulnerable customers have previously encountered difficulties in adhering to smart energy plans (Ofgem Market Report). As a trusted party, known to be independent of providing products and commercial services, it is appropriate for WPD to be contacting vulnerable customers on this matter. These customers may need additional support. It is crucial that this support comes through an independent source, such as WPD. With this commitment, customers with the most serious vulnerabilities are proactively identified and offered support.</p>
2. Considered alternative approaches (and options presented were sufficiently ambitious)	<p><u>Why did we offer these options / evidence of appropriate ambition:</u></p> <p>WPD's initial target for total PSR reach (actual sign ups vs total eligibility) in our first Business Plan submission to Ofgem in July 2021 (40%) was based on the most recent social indicator mapping data analysis (2019) available at the time. We had conducted optioneering with customers for levels of improvement from a starting baseline of 25-30% reach (when calculated on total population in our region of circa 28 million) as follows:</p>

	Option 1:	Option 2:	Option 3:	Option 4:	Option 5:
Ambition level:	Identify and engage 20,000 hard-to-reach vulnerable customers each year to join the Priority Services Register within RIIO-ED2 (32.5% reach – based on total population)	30,000 customers annually (35% reach – based on total population)	40,000 customers annually (37.5% reach – based on total population)	50,000 customers annually (40% reach – based on total population)	Even further ambition / an alternative (uncapped)
Bill impact:	-0.5p	No bill impact	+0.5p	+1p	-

WPD's existing baseline of 25-30% PSR reach was based on:

Total population (not households, and also not considering cases of multiple PSR occupancy)

Analysis against standalone vulnerability reason codes (not considering the coincidence of these codes where an individual may have multiple vulnerabilities).

This methodology was previously fit-for-purpose as the analysis was used to identify and target WPD's PSR promotion activities and fuel poverty interventions. In order to consider a more robust view of total reach, we began re-running our analysis in early 2021, with an updated methodology, but this was not complete in time for the July Business Plan submission. This has since been completed and WPD's latest data is now based on households and the overall vulnerable situations facing those occupants (therefore considering where reason codes overlap and also multiple PSR occupants). Importantly this allows us to compare more accurately with WPD's current PSR total of 1.9 million, which is based on households not population.

This shows that WPD's updated current baselines are as follows:

Total PSR reach: ~59% of total eligible customers (Total eligible households = 3.2m; total currently registered 1.9m)

PSR reach specifically for critical medical needs (heart and lung, dialysis and oxygen): ~63%

By applying the scale of improvement requested previously by stakeholders via our extensive engagement, we proposed new targets for RIIO-ED2 as follows, which were subject to further stakeholder consultation in September 2021:

Total PSR reach: 75% of total eligible customers

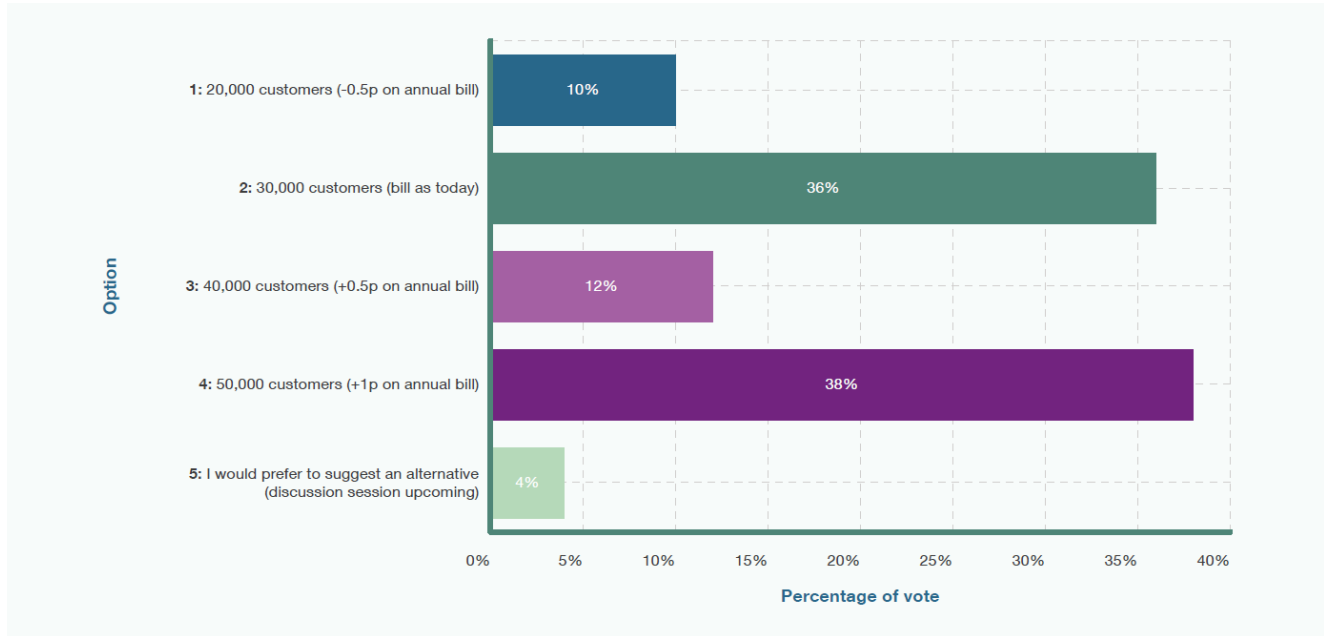
PSR reach specifically for critical medical needs (heart and lung, dialysis and oxygen): 80%

We have provided a more detailed overview of our methodology, with a breakdown of the datasets used to define total eligibility, in our updated Customer Vulnerability strategy. There is a lack of clarity on how the other DNO PSR targets have been reached. Absolute comparability and consistency is therefore difficult. However, based on the published headlines alone, WPD's current baseline reach is best in sector (following our unrivalled PSR data cleansing activities in RIIO-ED1) and our updated targets for RIIO-ED2 will be leading in the industry, which is compatible with our values and wider strategy to demonstrate leadership with regard to our services for customers in vulnerable situations.

Consideration of wider alternatives:

In addition, as key enablers to this overarching core commitment there are a number of ambitious new actions, as well as stretches to existing performance, that WPD has committed to deliver. WPD's co-creation events resulted in a large number of unprompted stakeholder suggestions in relation to this area. Of these, the vast majority are wider commitments that we will deliver in RIIO-ED2. This is a strong indication that WPD's current commitments are at a level of ambition that stakeholders support. For example:

	Topic: Identifying vulnerability	
	Stakeholder created actions:	Included in WPD's plan?
	a) Continue to identify vulnerability by working with partners including local authorities, disability forums and health and social care providers	Yes
	b) Broaden the description of vulnerability and clearly define what this means ensuring the terminology you use does not put customers off	Yes
	c) Map customers according to demographics to identify vulnerable customers and consider carrying out a vulnerability census	Yes
	d) Include vulnerable premises such as are homes and sheltered accommodation on the PSR	Yes
	e) Use smart meter data to identify vulnerable customers	No – licence conditions restrict this
	f) Raise awareness of the PSR and the services you provide	Yes
	g) Consider rural vulnerabilities and vulnerable areas such as those prone to flooding	Yes
	h) Work with suppliers to identify vulnerability	Yes
	i) Share vulnerability data with emergency services	Yes
	j) Identify the right source of help for vulnerable customers	Yes
	k) Show leadership in this area and foster a joined-up approach with relevant partners	Yes
	l) Understand that the risk of vulnerability increases with electrification	Yes
	m) Continue to train WPD workforce to identify vulnerability	Yes
	n) Develop automated registration for customers reliant on medical equipment	Yes
	o) Continue to develop one PSR across utilities	Yes
	p) Work with the postal service	Yes
3. Costs are efficient and benefits of the actions plausibly outweigh the costs	Cost <p>To deliver this commitment, there is the need for an annual budget of 200k to expand WPD's PSR referral partnerships and a budget of £135k to expand the internal resource required to project manage the tasks, in a total of £1.68m over the five year period of RIIO-ED2.</p>	
	Societal benefit <ul style="list-style-type: none"> This commitment contributes to the delivery of the consumer Vulnerability Strategy, with a wider positive social impact in the territory covered by our network. Under this commitment, customers with the most serious vulnerabilities are proactively identified and offered support. The benefit is largely felt in the form of reduced stress during an outage; a benefit that applies to approximately half of WPD's 1.9 million PSR customers a year (the average customer is impacted by a power cut once every two years). In addition to reduced stress, our PSR customers are eligible for additional support, in the form of crisis packs, portable generators, and British Red Cross support, that can only be provided effectively to those with updated details on our register. WPD provides thousands of generator hours and crisis packs each year, enabled by the PSR. This commitment is valued by our customers at £1.91 through our willingness to pay research, resulting in a total benefit of £15.28m, significantly above the cost to deliver. 	
4. Customers, as well as stakeholders, support the Business Plan	<p>Our stakeholders wanted us to ensure that we encourage hard-to-reach vulnerable customer to join our PSR, revealing this as a high priority area. In RIIO-ED1 on average, around 20,000 newly identified customers are registered to WPD's PSR each year, as a result of our outreach and referral partnerships. Stakeholders discussed the difficulties in identifying and engaging the vulnerable, especially as a result of communication going digital due to the pandemic, and because it is a private matter and sometimes people do not feel comfortable or become defensive discussing these issues. Stakeholders therefore wanted to see WPD set up a referral process with partner organisations. The pandemic has also revealed different types of vulnerability that need to be understood and accounted for.</p>	

	<p>As set out in detail in Annex 5, stakeholders place a very high priority on the importance of this core commitment:</p>  <table border="1"> <thead> <tr> <th>Option</th> <th>Percentage of vote</th> </tr> </thead> <tbody> <tr> <td>1: 20,000 customers (-0.5p on annual bill)</td> <td>10%</td> </tr> <tr> <td>2: 30,000 customers (bill as today)</td> <td>36%</td> </tr> <tr> <td>3: 40,000 customers (+0.5p on annual bill)</td> <td>12%</td> </tr> <tr> <td>4: 50,000 customers (+1p on annual bill)</td> <td>38%</td> </tr> <tr> <td>5: I would prefer to suggest an alternative (discussion session upcoming)</td> <td>4%</td> </tr> </tbody> </table> <p>While there was some disagreement in the feedback received from stakeholders initially, a majority of 54% wanted WPD to go further than our initial proposal of option 2. Of the five options the highest support (38%) was for WPD to identify 50,000 new customers a year. Informing our decision to go with this option was the fact that an even higher proportion of end user customers (57%) supported this option out of the five offered. Covid-19 was also seen as a factor in increasing the number of people likely to need support, and at our engagement events throughout 2021 we saw the strength of stakeholder feeling for WPD to go as far as possible in identifying and supporting customers in vulnerable situations strengthen considerably.</p> <p>This culminated in 81% of customers supported this initiative as part of WPD's acceptance testing.</p>	Option	Percentage of vote	1: 20,000 customers (-0.5p on annual bill)	10%	2: 30,000 customers (bill as today)	36%	3: 40,000 customers (+0.5p on annual bill)	12%	4: 50,000 customers (+1p on annual bill)	38%	5: I would prefer to suggest an alternative (discussion session upcoming)	4%
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<p>5. Customers are not exposed to unacceptable risks</p>	<p>WPD's performance in relation to customer vulnerability will be subject to a financial ODI, which means that significant under delivery against the targets set for this commitment could result in financial penalties being imposed. In addition, with such a significant cost benefit per supported customer as outlined above, even a modest under delivery against the overall target would still deliver significant benefits to all customers identified and registered on the PSR.</p> <p>WPD is experienced in delivering the work required by this commitment, minimising the risk of under delivery. During RIIO-ED1, we have delivered significant work to update and maintain an accurate PSR and support vulnerable customers, and WPD proactively contacted 957,309 PSR customers. Achievements included:</p> <ul style="list-style-type: none"> • 43,856 direct sign ups to WPD's PSR • 106 PSR referral networks identifying hard-to-reach customers 												

	<ul style="list-style-type: none"> • 19 fuel poverty support schemes all provide PSR referrals • 60k reached by PSR 'YouAreOurPriority' social media campaign • Online PSR Information Hub created • 46,500 patients reached by PSR animation adverts in GP surgeries
6. Assurance undertaken	<p>WPD has a strong track record of external accreditations from independent experts who assess and endorse our vulnerability processes. These institutions and associated accreditations (including the BSI standard for inclusive service provision, the Customer Service Excellence Standard, Action on Hearing Loss' Louder Than Words accreditation and AbilityNet accessibility accreditation) provide guidance and advice that allow us to set strategic direction, assuring us that our targets are sufficiently ambitious based on extensive benchmarking across a range of sectors.</p>



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