

Stakeholder engagement workshops

Co-creating our Business Plan Commitments for 2023-2028

February & March 2020

**WESTERN POWER
DISTRIBUTION**

Serving the Midlands, South West and Wales

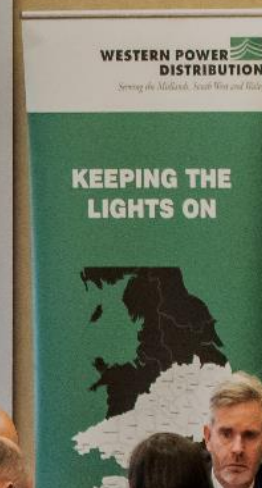


1. OUTCOMES: QUESTIONS

WPD needs to communicate in a way that helps stakeholders to understand what we commit to deliver:

- Are WPD's six strategic outcomes still appropriate – are there any missing?
- Do you agree with how we propose to structure our strategic outcomes under Ofgem's new categories?

Meet the needs of consumers and network users	Maintain a safe and resilient network	Deliver an environmentally sustainable network
All customers in vulnerable situations supported	A safe and secure network for all (public and staff)	A smart, flexible & interconnected network (that is future proof)
Information accessible easily (A in the format customers want)	Keeping the lights on (with lowest ever levels of power cuts)	
Efficient, value for money service (with the lowest possible bills)		



**POWER CUT?
CALL 105**



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Housekeeping



Overview and purpose of the day

Who we are

- We operate the local electricity network, distributing power to nearly 8 million homes & businesses
- Covering the East and West Midlands, South Wales and South West England

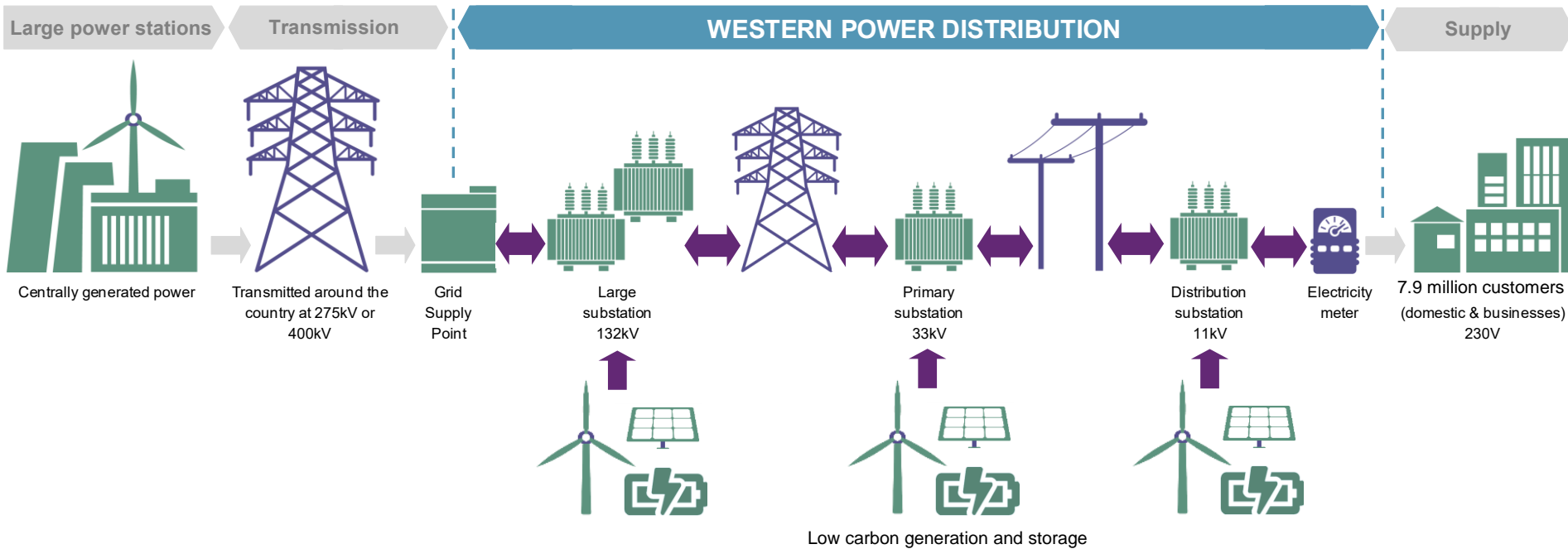
Network assets

Cables and overhead lines	225,000 km
Poles and towers	1,389,000
Transformers	188,000



Who we are

- We operate the local electricity network, distributing power to nearly 8 million homes & businesses
- Covering the East and West Midlands, South Wales and South West England
- A Distribution Network Operator (DNO) including a Distribution System Operator (DSO)



What we do



Keep the lights on

by operating our network assets effectively



Maintain equipment

so that the network remains reliable



Fix the network

if equipment gets damaged or is faulty



Connect customers

by upgrading existing networks or building new ones



Operate a smart system

by managing two-way power flows and flexibility services



Business planning process

You are a WPD customer if you live or work in our region:

- **Ofgem** regulates how much revenue we can earn and what we must deliver
- **Price controls** are set by Ofgem to determine how much we can spend and what customers will receive as a result
- Our **Business Plan** sets out, in detail, our commitments to stakeholders, performance targets and planned investment and expenditure
- **2023-2028**, the next Business Plan period, will run for 5 years and is called “RIIO-ED2”



“RIIO-ED2”:
Revenue = Incentives + Innovation + Outputs
(Electricity Distribution 2)



Co-creating our Business Plan with you

Engagement with our stakeholders is essential at every stage

We will:

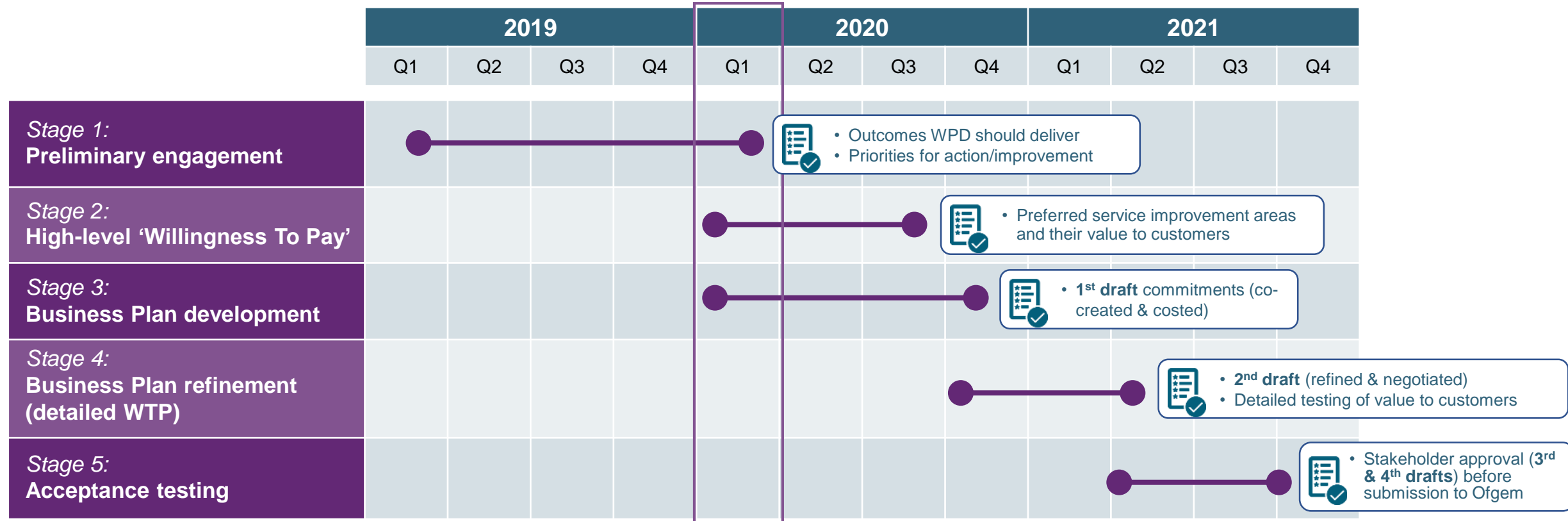
- Build our plans with you from scratch – “a blank sheet of paper” starting from your priorities
- Deliver a Business Plan that’s created with stakeholders, not just amended following their feedback

OTHERS			WESTERN POWER DISTRIBUTION Serving the Midlands, South West and Wales	
Inform	Consult	Involve	Co-create/collaborate	Negotiate
<i>“tell you about plans or proposals” Opportunities to make comments on pre-written commitments, without the opportunity to shape these from scratch</i>	<i>“inform, work with you to acknowledge concerns, be open to your influence, and should feed back on how input has influenced outcome”</i>	<i>“inform, ensure that your concerns are directly reflected in alternatives developed and will provide feedback on how input has influenced outcome”</i>	<i>“We will look to you for advice and innovation in formulating solutions. We will incorporate your advice into the decision-making process to the maximum extent possible”</i>	<i>“We will implement what you decide”</i>



Our engagement timetable

We will build our plan with stakeholders, from scratch, via 5 stages



Preliminary engagement - 2019

We consulted 2,058 stakeholders specifically on our Business Plan last year

Q: “What are your overall priorities?”

- 15 unique engagement events including: workshops, surveys, research events, online panels, focus groups and conferences
- Mixture of end users (with little prior knowledge) and future customers, through to stakeholders with high knowledge/interest of the industry
- In stakeholders’ own words, there are 14 headline priority topics for WPD to address and build commitments against in our Business Plan:

Topic

Network reliability (day to day)

Including: Network reinforcement

Network resilience (to severe weather)

Including: Scenario planning

Cyber resilience

Whole systems approach to net zero

Including: Future energy scenarios; Supply-demand forecasting

Innovation and new services

Including: Building a smarter network; Network flexibility; Industry collaboration

Electric vehicles

Environment

Vulnerability

Fuel Poverty

Affordability

Including: Value for money; Social contract

Safety

Connections

Workforce resilience

Customer service*

+66 starter suggestions for priorities and actions to consider within these topics...

...that we'll share with you today



Today's format – co-creation workshops

Q: “What commitments do you want us to deliver?”

- Today's format will be a little different to our usual approach:

Workshop One		Workshop Two		Afternoon focus groups
Topic group 1a	Topic group 1b	Topic group 2a	Topic group 2b	
<ul style="list-style-type: none">• Network reliability• Network resilience (to severe weather)• Cyber resilience	<ul style="list-style-type: none">• Whole systems approach to net zero• Innovation and new services	<ul style="list-style-type: none">• Electric vehicles• Environment	<ul style="list-style-type: none">• Vulnerability• Fuel Poverty	<ul style="list-style-type: none">• Safety & health• Connections• Workforce resilience• <i>Plus</i> “Digitalisation, Data & DSO” strategy development

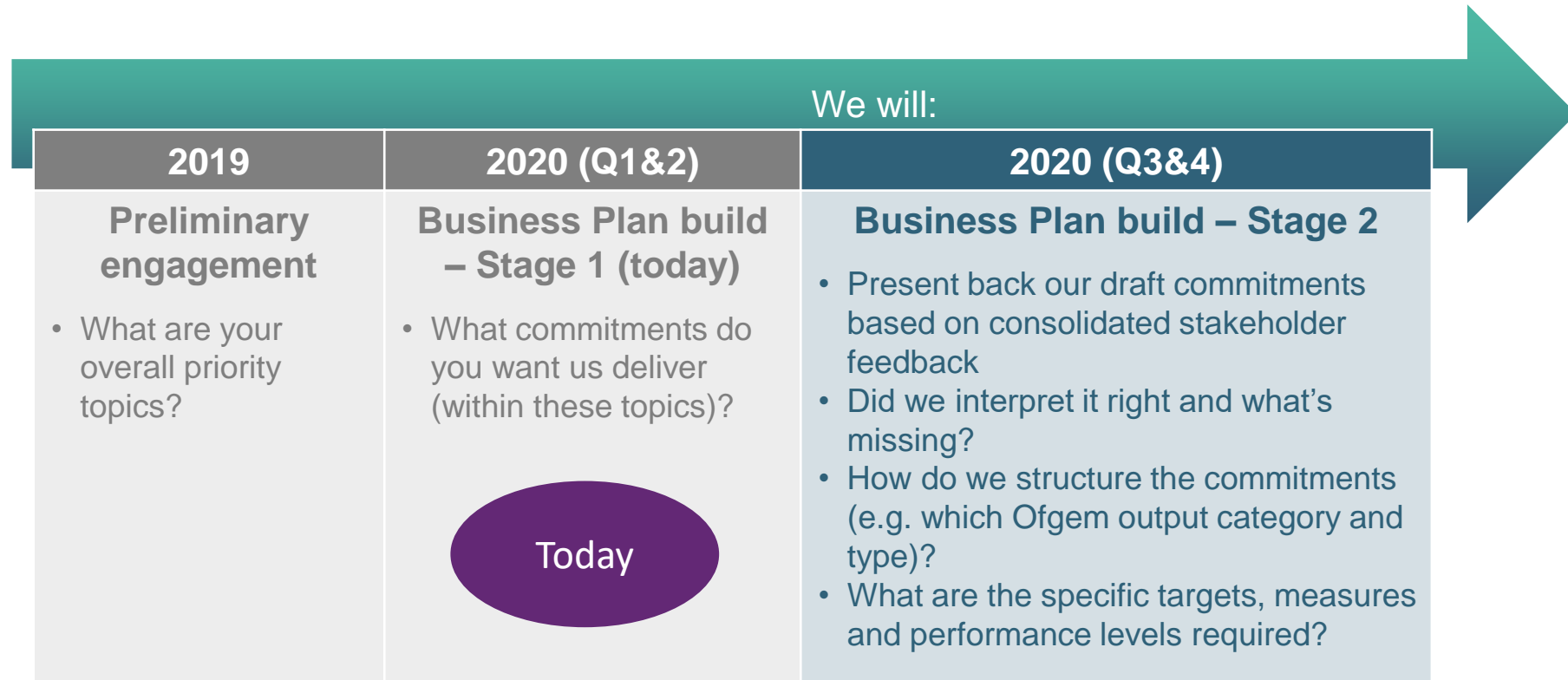
- **A short context presentation:** “The landscape we expect to operate in during RIIO-ED2”
- **Facilitated round-table discussion to:**
 - Tell us your priorities in each topic
 - Review the priorities other stakeholders have told us
 - Begin to draft the commitments you would like WPD to deliver
- **During each workshop the room will be split:**
 - Between the two topic groups, with a swap at half way
 - As well as giving your views, you can review and refine suggestions made by others



Next steps



How we'll use your feedback:



The RIIO-ED2 business planning process *- Outputs and commitments*

Making commitments that meet stakeholder needs

In the WPD ED2 Business Plan we will need to include:



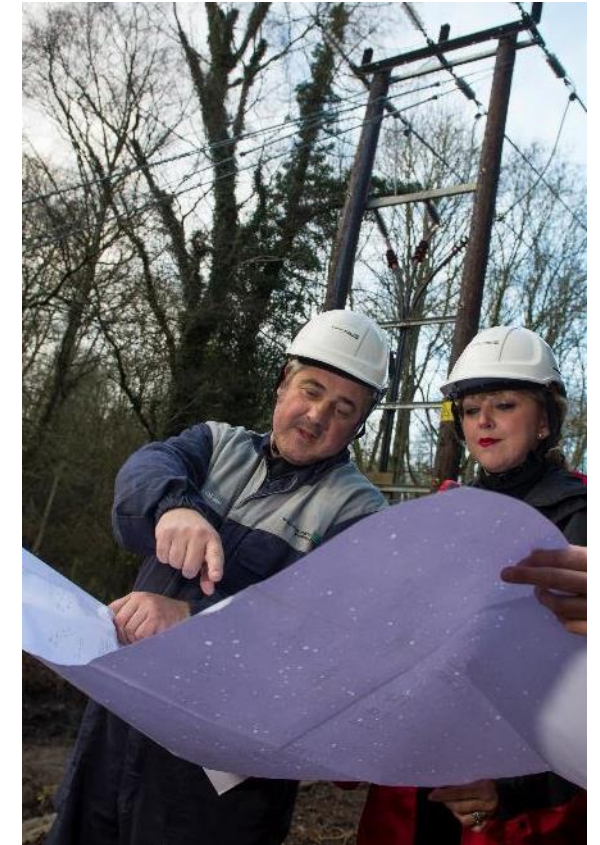
Service = What will be delivered for stakeholders (improvements, enhancements and new services)



Activity volumes = The amount and type of work that we will deliver

£m

Expenditure = How much we propose to spend



Ofgem's outcome categories

Ofgem has specified common outcomes across gas and electricity sectors

Meet the needs of consumers and network users

Network companies must deliver a high quality and reliable service to all network users and consumers, including those that are in vulnerable situations

Maintain a safe and resilient network

Network companies must deliver a safe and resilient network that is efficient and responsive to change

Deliver an environmentally sustainable network

Network companies must manage the impact of their activities on the environment and enable the transition towards a smart, flexible, low cost and low carbon energy system for all consumers and network users



Ofgem's framework for outputs and incentives

Eventually the commitments stakeholders help us to build will be structured as follows:

Common Elements (all DNOs)

Licence Obligation (LO)

- Must do
- Sets minimum standards
- Failure leads to enforcement

Output Delivery Incentive (ODI)

- Financial incentives
 - Penalties and/or rewards
- Reputational incentives
 - League tables

Price Control Deliverable (PCD)

- Consequences for non delivery of activity

Bespoke Elements (WPD only)

- Bespoke incentive for activity being carried out in WPD

- Bespoke PCD for a WPD work programme



The purpose of today

1) Review of what stakeholders have told us are priorities

- Tell us your priorities in each topic
- Review the 14 headline priority topics other stakeholders have told us

2) Begin to co-create our Business Plan commitments

- *“Make sure you address...”*
- *“Set a target for”*
- *“Maintain focus on...”*
- *“Improve the amount of...”*
- *“Can you work with...”*

By “commitment” we mean:

*The things you want
us to deliver*



We will turn your input into proposals

Compilation

- Compile all of your draft commitments
- Add how we can address the requirements of these commitments
- Add in any other factors we must consider (e.g. Ofgem requirements)

Allocation

- We will take your feedback and align it to Ofgem's framework
- Conversion of feedback into LOs, ODIs, PCDs, Wider Commitments



As a next step, we will:

Return to stakeholders in Q4 2020 to check if we've got it right



How we'll eventually structure the commitments



Social contract: *“Build trust, demonstrate we act in a socially responsible way and positively contribute to the communities we serve”*

- Aspects include: corporate governance, local engagement, community investment, shareholder returns, environmental performance etc
- Stakeholders are clear this must be a golden thread running through our whole business plan, including commitments beyond our core business requirements



Workshop one (topic groups 1a & 1b): *The landscape we expect to operate in*

Network Reliability

Definitions

- **Network reliability:** this refers to the everyday performance of the network and its ability to serve our customers, taking into account the number and frequency of power cuts (customer interruptions) as well as their duration.

The landscape we expect to operate in

- **Keeping the lights on** remains very important
- **The dependence on electricity** will grow if customers move to electrical power for heating and transport
- **Changing customer behaviour** will mean that customers will expect to use their connection more dynamically, with Electric Vehicle or Battery Storage equipment flexing demand and consumption

Key context

- Customer Minutes Lost (CML) measures duration of power cuts
 - Av duration that customers were without power: **25 mins**
- Customer Interruptions (CI) measures number of power cuts
 - On average customers have 1 power cut every 26 months
- Short Interruptions (less than 3 minutes): **476** incidents affecting **over 7m** customers
- Worst Served Customers with higher than average fault history
 - Number customers with 12 or more HV interruptions in 3yr period: **6,385**



Network Reliability

Priorities stakeholders have told us to consider:

Power cut frequency

Customer service during power cuts

Worst served customers
(significantly higher than average number of power cuts)

Power cut duration

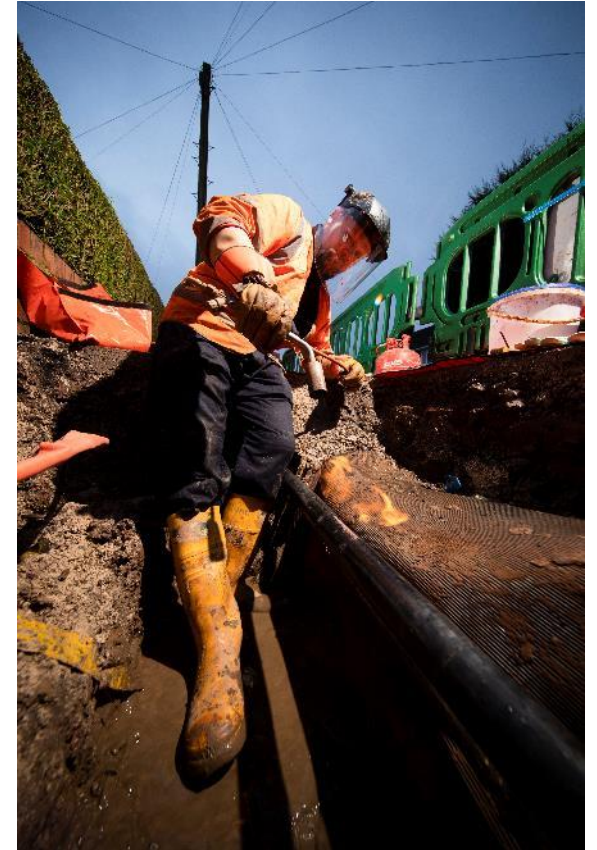
Quality of supply
(e.g. short interruptions, flickers, dips etc)

Interconnectivity of the network
(more options to reconfigure the network during power-cuts)

Overall health of network assets
(e.g. replacing and refurbishing aging assets sooner)



Would you add or change anything?



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Network Resilience

Definitions

- **Network resilience:** this is the ability of the network to withstand extreme events such as storms and flooding, and having the ability to recover quickly from widespread power black outs.

The landscape we expect to operate in

- **Climate change** is changing the patterns of weather that we see.
 - Storms are more likely in the future with more lightning, flood events and high winds predicted
 - Continued programme of tree clearance required to increase storm resilience
 - Trees growing faster in warmer climate



Key context

Since 2015:

- Flood defences installed: **69** substations
- Resilience tree cutting: **2,947 km** strategic overhead line cleared
- Design specification of overhead transformers has defended them against lightning strikes



Network Resilience (severe weather)

Priorities stakeholders have told us to consider:

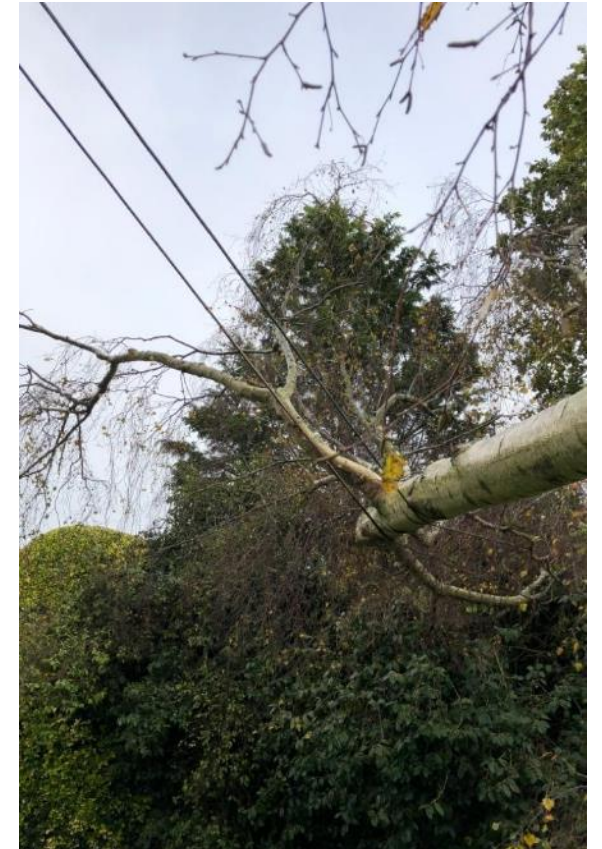
Tree cutting
(high risk circuits)

Flood protection
(key substations)

Scenario planning / data analysis
(to better identify areas of network at risk due to severe weather)



Would you add or change anything?



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Cyber Resilience

Definitions

- **Cyber Attack:** this is the attempt to gain unauthorised access and control of a computer network / system to cause damage or to steal information.
- **Cyber Security:** this is the technology, processes and controls that can be put in place to protect systems against cyber attacks.

The landscape we expect to operate in

- **Cyber attacks** are growing in frequency and sophistication, increasing threat and risk to:
 - **Network security:** risk of power cuts, safety of staff
 - **Systems security:** risk of customer and company data access / loss
- The move to a **smart network** will pose a risk to:
 - **Control:** increasing interconnection, monitoring and control of network assets (e.g. substations) requiring cyber security
 - **Customers:** more data shared with and accessed by customers (e.g. smart meters)
 - **Flexible services:** more real time data interfaces with our systems will be created
- **Regulation** will require further enhanced cyber security measures

Key context

- **7,500** desktops, laptops, Servers and smart devices to secure
- **122,000** malicious e-mails blocked per month
- We have traditionally taken data from our **1,800** primary substation sites
- In the future we are likely to take data from many of our **200,000** distribution sites



Cyber Resilience

Priorities stakeholders have told us to consider:

Network security – risk of power cuts due to a cyber attack

Coordinate network planning with other utilities to find best solutions

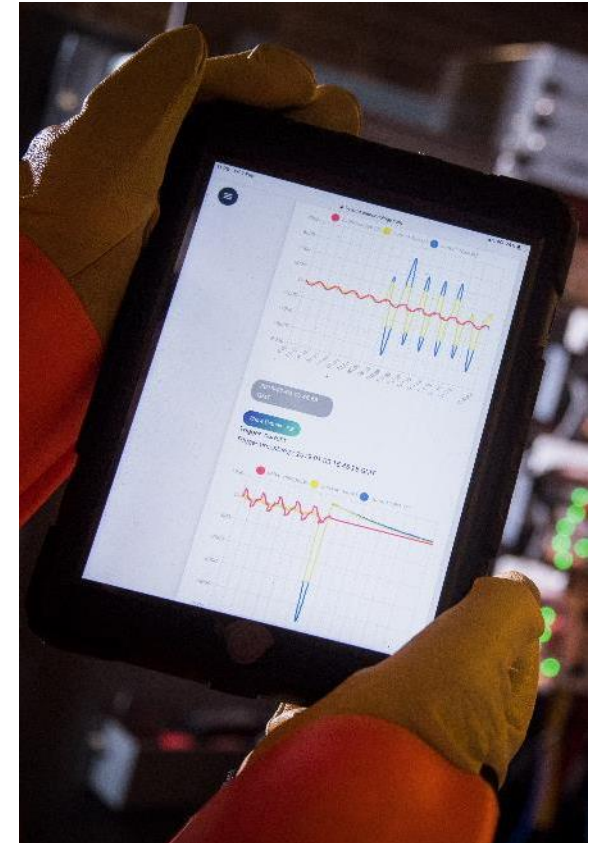
Systems security – risk of data loss/access
(e.g. customer personal data)

Incident recovery plans

Collaboration to share best practice approaches
(e.g. Government agencies and stakeholders from other industries)



Would you add or change anything?



Whole System Approach to Achieve Net Zero

Definitions

- **Net Zero:** the Government has set a target to achieve net zero greenhouse gas emissions by 2050 in the UK
- **Whole system outcomes:** this is an approach to ensure that the energy system as a whole is effectively coordinated so that it delivers best value for consumers in terms of affordability, security and sustainability
 - Incorporates: electricity, gas, (distribution and transmission) heat and transport

The landscape we expect to operate in

- **Closer collaboration** between gas and electricity to solve network constraints (short term) and make best use of existing infrastructure to reach net zero target (long term)
- We must carry out an **assessment of best solutions** to inform investment decisions and ensure neither the gas or electricity networks are over or under developed to deliver a net zero future
- **Increasingly open data** will allow for greater access to information from other network operators to promote whole system thinking across energy, heat and transport

Key context

- Of the total GB energy demand* in 2018, **26% was met by electricity and 74% was met by gas**
(*excluding oil and solid fuel)
- WPD's Distribution Future Energy Scenarios (DFES) are aligned with National Grid's Future Energy Scenario (FES) planning
- Joint Regional Development Plans are being created with National Grid



Whole System Approach to Achieve Net Zero

Priorities stakeholders have told us to consider:

Facilitate collaboration between local groups to deliver local energy plans

(e.g. local authorities, developers, EV charge point providers)

Coordinate network planning with other utilities to find best solutions

Localised WPD future energy scenarios

(predict future changes and uptake of e.g. PV, wind and energy storage)

Where reinforcement is required ensure it's "future proofed"

(e.g. caters for the predicted needs up to 50 years)

Help local communities to achieve their net zero carbon emissions targets

(support the creation of local development plans, net zero targets and climate emergency plans)



Would you add or change anything?



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Innovation and New Services

Definitions

- **Innovation:** this is finding better ways of working and adopting innovative ideas to improve the efficiency and effectiveness of our services - safely and reliably.
- **Flexibility:** this is where the DNO pays customers to change their demand or generation output to help manage network capacity and peak periods
 - Benefits: WPD can avoid or defer costly network reinforcement construction. Customers providing flexibility services can generate additional revenue.

The landscape we expect to operate in

- **Flexibility:**
 - **Market facilitation**
 - **Decarbonisation:** e.g. flexibility provided by low carbon sources
 - **Network Security**
 - **Data Security**
- **Innovation:**
 - **Increased network utilisation**
 - **Decarbonisation:** facilitate low carbon technologies
 - **New customer services**
 - **Collaboration**

Key context

- **334MW** of flexibility currently being sought
- **42** flex locations covering approximately 1/5 of the network
- **123MW** contracted to date
- **31** active innovation projects funded through Ofgem's innovation stimulus



Innovation and New Services

Priorities stakeholders have told us to consider:

Roll-out network flexibility to all areas for commercial customers

Roll-out flexibility services for domestic customers

Communication, education and advice for customers

(to explain the benefits and encourage their participation in flexibility)

Support community energy projects to connect to the network

Collaborate with industry to offer tariffs to encourage flexibility

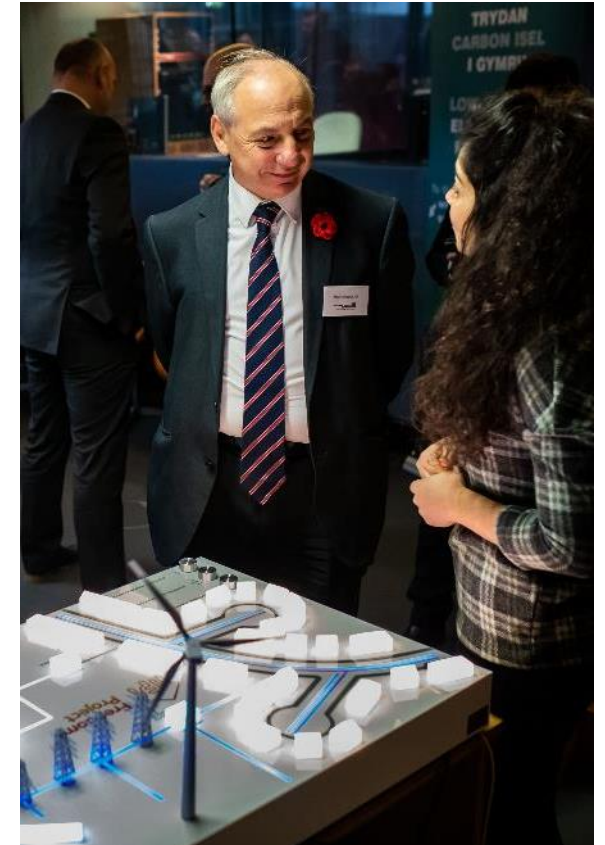
(e.g. DNOs and suppliers)

Facilitate heat pump take up

(and other low carbon technologies)



Would you add or change anything?



Roundtable discussion

In this roundtable discussion we will ask you to consider the following questions...

- 1) **Blank page – what are the priorities you want delivered under each topic?**
- 2) **Review the priorities other stakeholders have started to fill in on the blank page – do you agree, is there anything more?**
- 3) **Blank page – what commitments do you want us to deliver under these priorities?**

Workshop One	
Topic group 1a	Topic group 1b
<ul style="list-style-type: none">• Network reliability• Network resilience (to severe weather)• Cyber resilience	<ul style="list-style-type: none">• Whole systems approach to net zero• Innovation and new services



Workshop two (topic groups 2a & 2b): *The landscape we expect to operate in*

Environment

Definitions

- **Environmental impact:** this refers to the impact of our business locations, vehicles and operational activities.
- Incorporates: energy usage, carbon footprint, waste, spills and leaks of harmful substances (e.g. oil and greenhouse gases)

The landscape we expect to operate in

- Our **Business carbon footprint** must respond to the Government target of net zero greenhouse gas emissions by 2050
- The Government will ban on new petrol, diesel and hybrid **vehicles** by 2035
- We must be mindful of **biodiversity and** protect of habitats
- We have to reduce **waste, oil and greenhouse gas**
- **New construction standards** will need to need to align with net zero

Key context

- Number of commercial vehicles in fleet end of 2019: **3,277**
- **SF₆** greenhouse gas used to insulate switchgear. Out of total switchgear (85,916kg) there were leaks of **479kg SF₆**
- Fluid filled cables containing oil: **731km containing 1.66 million litres**
- Leaks from cables last year: **45,472 ltrs** (majority from two cable)
- Containment walls or 'bunds' can be constructed around plant to prevent leaks during RIIO ED1: **134** bunds have been repaired or installed



Environment

Priorities stakeholders have told us to consider:

Carbon emissions from WPD vehicle fleet

Carbon footprint of WPD's buildings and depots

Impact on local environment and impact on biodiversity

Waste sent to landfill

Plastic usage

Harmful leaks from WPD's equipment
(e.g. liquids and gases from equipment)



Would you add or change anything?



Electric Vehicles

The landscape we expect to operate in

- **Net zero** will drive the uptake of electric vehicles in the UK
- **Different charge locations** will create different charge rates/network loading. Customers are expected to charge at either **Home, Work/Destination** or **En route**
- **Climate emergencies**, where declared by cities and local authorities, may accelerate the need for EV infrastructure and services
- **High volume locations** such as bus depots and motorway service areas will be used by EV owners
- A reduction in **vehicle costs** is likely to increase consumer demand, as will changes to company car taxation in April 2020

Key context

- “High” predictions expect around 3 million EVs on our network by 2030
- Up to 217,000 chargers could be connected to our network by 2023
- Our Electric Nation project showed how domestic customers charge at home, with charging every few days and often avoiding peaks
- Latest Government ban on new petrol, diesel and hybrid vehicles by 2035



Electric Vehicles

Priorities stakeholders have told us to consider:

Facilitate electric vehicle take up –
individual customer level

(provide sufficient capacity and infrastructure for EV charging)

Easy access to charge points
when away from home

(located across the network)

Facilitate electric vehicles on a mass scale

(help communities, local authorities and technology providers with
guidance, forecasting (e.g. potential constraints) and technical information)

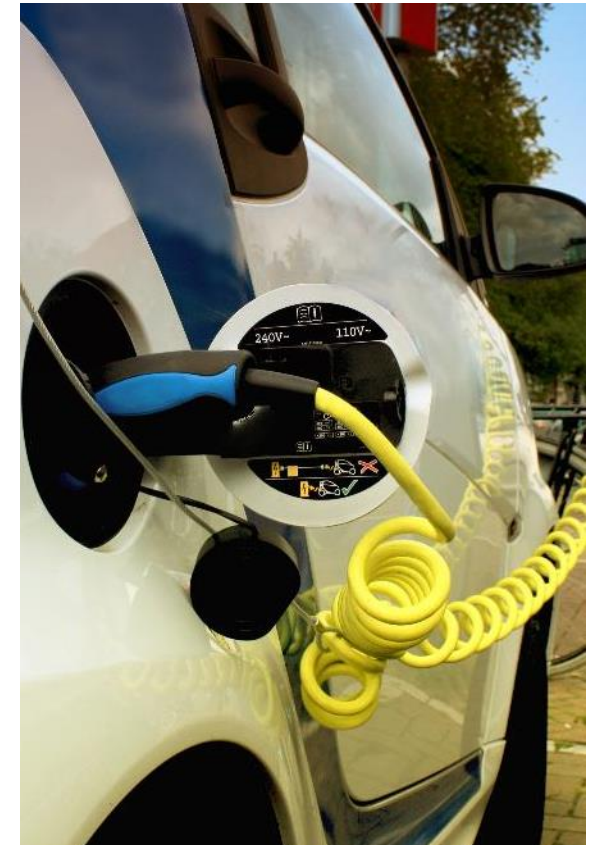
Speed of charging

Easy process to install a
charge point at home

Cost of charging when
away from home



Would you add or change anything?



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Vulnerability and Fuel Poverty

Definitions

- **Vulnerability:** this is WPD's key focus to protect and support customers in vulnerable situations (especially during power cuts), ensuring they do not suffer detrimentally and instead receive additional, tailored support
- **Fuel Poverty:** this is anyone struggling to afford their energy bills, and those left below the poverty line once their bills are met

The landscape we expect to operate in

- We need to focus on **resilience** in relation to power cuts (before, during and after)
- The costs of decarbonisation could place pressure on bills, impacting **affordability**
- **Fuel Poverty** remains a challenge and WPD is uniquely placed to address this
- An **open data environment** means increased data sharing and collaboration between utilities
- **A smart future and achieving net zero** provides opportunities for customers in vulnerable situations and fuel poverty to reduce energy usage and costs
 - New products, services and activities will bring new interactions with customers. Must ensure customers can understand and engage with these

Key context

- **Resilience:** Priority Service Register (PSR) - 1.9m customers
- **Affordability:** average domestic customer pays - £98 / yr
- **Fuel Poverty:** 14 partnership schemes tackling fuel poverty: c.18,000 customers saving £8m per yr



Vulnerability and Fuel Poverty

Priorities stakeholders have told us to consider:

Customer resilience
(safety & peace of mind)

Protect the interests of vulnerable customers
in the switch to a smarter network

Identifying vulnerability
(customers for the Priority Services Register)

Partnerships and outreach services
(Power cut support, Fuel poverty support)

Referral networks, data
sharing and data quality

Accessibility of our
services

Maintain a Priority
Services Register



Would you add or change anything?



Roundtable discussion

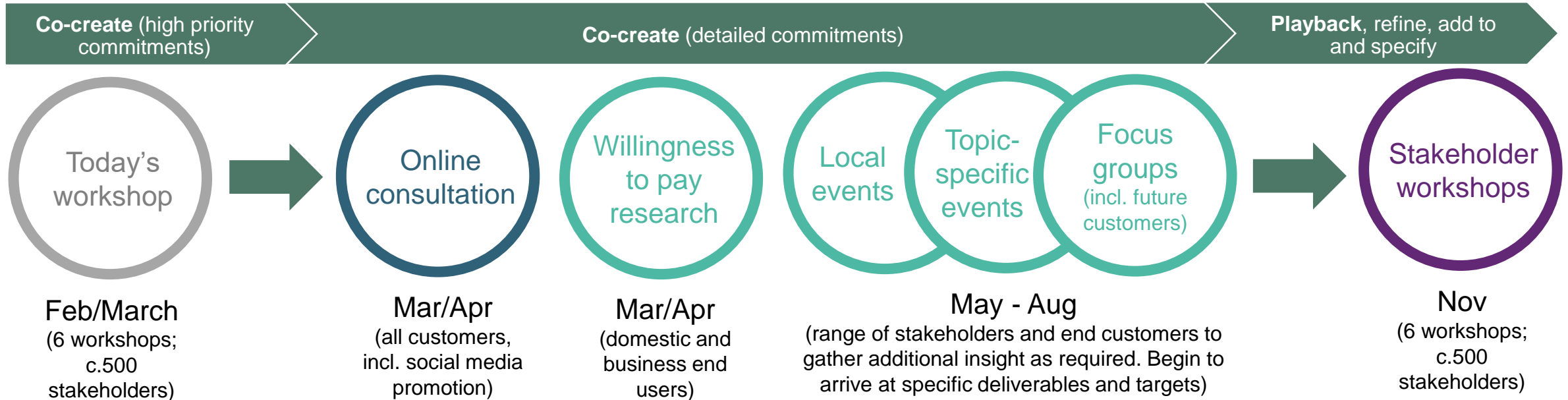
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Workshop Two	
Topic group 2a	Topic group 2b
<ul style="list-style-type: none">• Electric vehicles• Environment	<ul style="list-style-type: none">• Vulnerability• Fuel Poverty



Next steps



- **From today's events:** Slides and findings reports will be posted on: <https://yourpowerfuture.westernpower.co.uk>
- **Upcoming online consultation:** if thoughts occur to you after you leave today and/or you know of others that ought to participate then please respond (all stakeholders on our database will be sent a link)
- **November 2020 (10/11/12/17/18/19):** Dates for your diary





Serving the Midlands, South West and Wales

Thank you for attending

- Please take a moment to fill out a feedback form about today's event
- Come and talk to WPD staff over lunch
- We would appreciate feedback on any of the areas discussed today. Please contact:

Richard Allcock, Stakeholder Engagement Manager



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