

WPD

Stakeholder workshop reports

February 2012

Birmingham stakeholder workshop

22rd February 2012

2. Contents

1.	Birmingham stakeholder workshop	1
2.	Contents.....	2
3.	Introduction	4
3.1.	Date and location	4
3.2.	Attendees:.....	4
4.	Workshop 1: Customer Service and Networks of the Future	8
4.1.	Issue 1. New / innovative methods of communication	8
4.2.	Issue 2. Improving service for new connections	11
4.3.	Issue 3. Being prepared for major emergencies	13
4.4.	Issue 4. Improving reliability for worst-served customers.....	17
4.5.	Issue 5. Asset replacement to maintain business as usual.....	19
4.6.	Issue 6. Future proofing asset replacement	21
4.7.	Issue 7. Real time data exchanges and control to enable scheduling of data and storage	23
4.8.	Issue 8. Metal theft prevention / response.....	25
4.9.	Additional comments	27
5.	Prioritisation	31
5.1.	Improving customer service and the network	31
6.	Workshop 2: Innovation and the Environment	32
6.1.	Issue 1. Use innovation to support existing network and operate it more effectively.....	32
6.2.	Issue 2. Develop technologies to accommodate increases in electricity demand.....	34
6.3.	Issue 3. Trial technology and innovation to facilitate low carbon networks	35
6.4.	Issue 4. Turn successful trials into business as usual techniques / products.....	36
6.5.	Issue 5. Making better use of the current system capacity – e.g. Substation monitoring and Dynamic asset rating (allow us to use existing lines and cables more efficiently).....	36
6.6.	Issue 6. Smart technology and telecommunications – new installation of network that allows remote data monitoring and operation of assets.....	38
6.7.	Issue 7. Facilitating the connection of local renewable energy – e.g. impact of solar panels and 2-way flows to network.....	41
6.8.	Issue 8. Facilitating electric vehicle charging infrastructure	43
6.9.	Issue 9. Minimising leaks from fluid filled cables and gas filled switchgear	47
6.10.	Issue 10. Continuing undergrounding schemes in National Parks / AONBs.....	50
6.11.	Issue 11. Protecting habitats and species	53
6.12.	Issue 12. Flood and climate change mitigation.....	55
6.13.	Additional comments	56
7.	Prioritisation and conclusions	58
7.1.	Innovation and the Environment.....	58
7.2.	Overall conclusions.....	66

8. Stakeholder feedback.....	69
Stakeholders were asked to fill out a comment form following the Birmingham workshop. The comments we received are shown below:	69
8.1. Q1. Did you find the workshops useful?	69
8.2. Q2. Was the venue conveniently located for you?	69
8.3. Did we provide enough information at the workshop.....	69
8.4. Do you want to be kept informed of WPD's plans in the future?	69
8.5. Do you have any other comments on the workshop or the venue?	70

3. Introduction

3.1. Date and location

The Birmingham stakeholder workshop took place on February 22nd 2012 at Villa Park, Trinity Rd, Birmingham, B6 6HE.

3.2. Attendees:

50 stakeholders attended the Birmingham workshop. The details of all attendees are shown below:

- Graham Muir - Procurement Manager, MES Environmental
- Emma Beaman-Green - AONB Officer, Cannock Chase AONB
- Ben Horovitz - Principle Planner, Sustainable Development, Worcestershire County Council
- Oliver Harwood - CLA Country Landowners Association
- Keith Hewitt - Emergency Planning and Business Continuity Manager, Birmingham Community Healthcare NHS Trust
- Simon Adams - Regional Sales Manager (Automation) Alstom Grid UK Ltd
- Cllr Pauline Allen - Castle Bromwich Parish Council
- Mark Johnson - Managing Director, MES Environmental Ltd
- Alan Moore - Regional Business Continuity Manager, West Midlands Ambulance Service NHS
- John Morgan - Principal Planning Officer, Cannock Chase District Council
- Ian Pulford - Sales Director, BT
- Roy Stokes - Programme Manager FCRM (Midlands), Environment Agency
- Simon Vicary - Head of Non Energy Costs, EDF Energy PLC
- Mike Gittus - Environment & Planning, Stratford District Council
- Paul Bsylliss - Project Manager, South Worcestershire Development Plan
- Claire Wise - Security Emergency Planning specialist, Network Rail Emergency Planning
- Nadim Al-Hariri - Business Consultant, Logica UK

- Gavin Jones - Business Development Director, Electralink
- Ray Raychaudhuri - Key Account Manager, Alstrom Grid UK Ltd
- Bunmi Adefajo - TNEI Services
- Heather Loosemore - Senior Electrical Design Engineer, Coventry University Estates
- Andy Smith - Emergency Planning Manager, Wolverhampton Primary Care Trust
- Jonathan Wisdom - Network Book and Credit Cover Manager, NPower
- Dave Lee - Leicester City Council
- Cllr Eric Knibb - Castle Bromwich Parish Council
- Ben Kauffman - Smart Grid Consultant, Accenture
- Stewart Bailey - Managing Director, Virtual Viewing Ltd
- Glen Curry - Emergency Planning Officer, Birmingham City Council
- Steve Bollard - Electrical Connections Manager, Amey LG Limited
- Dave Roberts - Sustainable Networks Director, EA Technology Consulting
- Fred Coke - Assistant Director of Estates - Engineering , Birmingham City University
- Chris Crean - Friends of the Earth
- Jonathan Elmer - Senior Forward Planning Officer, Wyre Forest District Council
- David Kirkland - Technical Solutions Director, GE Energy
- Richard Knight - Engineer, Bellway Homes West Midlands
- Chris Nash - Planning Control Assistant, North Warwickshire Borough Council
- Bart Schouwink - Business Development Manager, Locamation
- Mike Foxall - Assistant Director Operations and Maintenance- Coventry University Estates
- Matthew Hardy - Planning Assistant - Cannock Chase District Council
- Muhammed Chris Short - Product Sales Manager (Security) -The Expanded Metal Company
- Peter Macro - Business Manager, Transmission & Distribution - GE Energy
- Cllr Sue Adams - Stafford District Council

- Andrew Wheen - Principal Consultant - Mott Macdonald
- Wasif Anwar - Costing Development Manager - E.O.N Energy Solutions
- Rodney Brook - Director-Sohn Associates
- Bernard Dunn - Engineering Manager - Barratt West Midlands
- Mohammed Azram - Development Plan Officer - Tamworth Borough Council
- Craig Yerby-Emergency Planning Officer - Shropshire Council
- Danielle Strickland - Aston university
- Darren Oakley - Principal Planning Officer, Housing & Development Planning - Telford and Wrekin Council

Western Power Distribution

- Alison Sleightholm - Regulation and Government Affairs Manager
- Nigel Turvey
- Bob Parker
- Natasha Richardson
- Alex Wilkes - Stakeholder Engagement Regulatory & Government Affairs
- Paul Jewell
- Phil Swift
- Lee Wallace
- Neil James
- Dave Park-Davies

Green Issues Communiqué

- James Garland - Director (workshop facilitator)
- Richard Suttcliffe-Smith - Director (workshop facilitator)
- Gabriel Abulafia – Director (workshop facilitator)
- Emma Webster - Associate Director (workshop facilitator)
- Harry Hudson - Associate Director (workshop facilitator)
- Ben Johnson - Account Manager (workshop facilitator)
- Jacqui Sweetman - Senior Consultant (workshop facilitator)

- Ed Grieve – Senior Account Manager (scribe)
- Alice James - Account Executive (scribe)
- Laura Edwards - Account Executive (scribe)
- Farah Pasha - Account Executive (scribe)
- Mike Denness - Account Manager (scribe)
- Debbie Fowler – Office Manager (scribe)
- Amardeep Kainth – Consultant (scribe)

4. Workshop 1: Customer Service and Networks of the Future

4.1. Issue 1. New / innovative methods of communication

Table 1

- The group saw this Issue as being medium priority. However, at the end of the session, half the table were of the view that this should be a 'top three' priority and asked for this to be noted
- A member of an energy group stated that *'you can't look at a computer when the power's down'* and asked *'can you use this innovative methods of communication when the network is down?'*
- A health care representative said that this topic *'worried'* them. (S)he said that issues with broadband and communications are on the increase. If the electricity companies look to put telecoms and power down the same channels there could be an issue. (S)he asked how much work is being undertaken with communications providers
- A health care representative stated that that this is a lower priority than other Issues

Table 2

- Priority: High
- A major user made the point that retailers would want a smart phone contact whereas major industries / corporations etc. would want a more *'formal process'*
- An officer of a local authority stated that since 2004, all councillors have a responsibility to produce an Infrastructure Delivery Plan (IDP) and that if any information is missing from the documentation it can *'fall flat on its face'*
- An elected representative and a local authority officer considered this Issue a high priority for domestic users, although (s)he cited the elderly who were unlikely to own smart phones
- A local authority officer commented that there had been problems with engaging with local electricity providers, such as *'no response'* on reporting back on the IDP consultation; (s)he asked WPD how much it would take to *'put it right'*, adding that communications were *'absolutely crucial'* and recommended meeting local authorities at county and district / borough level to explore ways to address this problem

Table 3

- Stakeholders ranked this as a medium priority
- An energy group representative stated that *'information is critical to the consumers'*. This stakeholder favoured the *'pyramid style of communication where information is cascaded out to stakeholders'*. The stakeholder would favour something similar in this instance
- A local authority officer commented *'it isn't always easy to know who to talk to'*, and she would appreciate more clarity and transparency that is broadcast to stakeholders. This stakeholder felt this should be added as a main priority

Table 4

- There was little discussion on this point, as there was consensus that this should be a high (top three) priority for WPD

Table 5

- A local authority planning officer stated that this Issue should be a medium priority. The group was in agreement
- A local authority planning officer stated that there would always be an inherent weakness to looking at 'new and innovative methods of communication'. As customers are mainly residential any loss of power will then limit means of contact. The stakeholder added that Smart Phones are prevalent so 'apps' would be useful as they are easy to use and require minimal effort from the customer
- An energy organisation representative agreed that customers will have problems if their phone is without power. The stakeholder added that monitoring the network is important for communication as it will allow the control centre to communicate easily and quickly with customers
- A local authority planning officer stated that, from personal experience of disconnection, the WPD/ Central Networks outages map on the website is very useful. The stakeholder added that (s)he would only pursue communication with WPD if the experienced outage is longer than anticipated
- An energy group representative stated that WPD needs to have ways of letting the customer know that WPD knows there is an outage and are dealing with the problem. This would reduce the number of phone calls to WPD at one time
- An energy group representative stated that *'2023 is a way off'* and technology is moving fast. The stakeholder used the rapid rise in use of Twitter as an example. It was added that it is difficult to predict the change in preferred mass communication methods
- An environmental group representative stated that stakeholders around the table need to remember that most customers will be reliant on basic forms of communication. The stakeholder queried how many people would know the

number to ring to contact WPD when the electricity goes down. This stakeholder raised the point about vulnerable people and the means of communication with this group of customers. This stakeholder stated that WPD needs to have better engagement with its customers

Table 6

- Stakeholders ranked this as a high (top three) priority
- An elected representative began the discussion by stating that their local Environment Agency liaises with their council to issue an early warning about any disruptions to services. This allows local residents to prepare in advance and it was suggested that WPD should consider a similar option
- A local authority officer also pointed out that an alternative method of communication, that does not require electricity, is needed
- An energy group representative highlighted that, from his experience, WPD already scores highly in this area and that the challenge was to ensure that this standard is consistently met across all of the regions that WPD covers. (S)he felt that at present the Midlands regions were currently lagging in this area
- A major user felt that WPD needed to be much more proactive when electricity supply is disrupted. (S)he suggested that WPD should have a single point of contact and adjust levels of compensation to reflect customers' expectations
- Moving the discussion forward a business representative stated that WPD needs to consider prioritising a marketing exercise designed to target the general public
- An energy group representative felt that there were two levels of efficiency between WPD's regions and that more needs to be done across the Midlands to catch up with WPD's standards in the Wales and the South West
- A local authority officer noted that innovation was not necessarily more effective
- An energy group representative continued this train of thought by adding that cutting edge modes of communication did not necessarily reflect the communication habits of the general population, and that reliable forms of communication were more important and effective

Table 7

- A local authority officer said (s)he was happy with the current phone service and website
- A representative of a developer commented that receiving an update or notification by email would be *'helpful'*
- A local authority officer admitted that, although power cuts are an inconvenience, (s)he can *'live and cope without electricity for an hour'*

4.2. Issue 2. Improving service for new connections

Table 1

- Priority: High
- An energy group member stated that (s)he was involved with an energy from waste plant in the midlands. In his / her experience it proves impossible to ask for the cost of connection which is causing issue when borrowing from foreign banks
- An energy group representative said *'it's done completely differently in Europe'*. The UK works differently to Europe and WPD doesn't give quotes for connections; therefore European banks do not understand the way WPD works
- A business representative would like to see more transparency in WPD's costings. Members of their business complain that costs to do with grading are unclear. (S)he requested that WPD be clear as to *'which cost is due to what'*
- An energy group member made the point that DNOs have outstanding issues, such as the HV charges.
- A business representative added that there was a working party looking into this
- A member of an energy group complained that, as a user, they have no say over the DNOs

Table 2

- Priority: High / medium
- An elected representative reported that (s)he had *'no experience of any problems'* but considered that WPD would need to *'improve their service'* for new connections *'in future'* as there was *'so much going on'*
- A representative of an environmental organisation asked WPD if they had *'much experience'* of problems for local developers. A WPD representative explained that there were localised problems
- An elected representative considered that this Issue was essential for all companies in order to enable them to their conduct business and therefore this should be a high priority
- Conversely, a representative from an energy company stated that it should be a medium priority as this Issue was not an *'absolute priority for all customers'*

Table 3

- Stakeholders ranked this Issue as a high priority
- An energy group representative found it strange that the supply of the various utilities all seem to be undertaken by different contractors on separate occasions.

The stakeholder suggested that there should be *'joined up thinking and joined up working'*

- An energy group representative stated that recent flood elevation work included a monthly stakeholder forum; this led to a more successful flow of work. The stakeholder suggested that WPD should strive to work with a forum like this to ensure smoother works and relationship within a community
- A representative of a major user commented that it is a difficult task to get to the right person at the right time in order to get issues resolved. Different teams of people undertook different aspects of the job. The stakeholder stated that better communication and a reduction in *'being passed from pillar to post'* is vital

Table 4

- Stakeholders were in agreement that this should be a medium to low priority
- A local authority officer commented that if WPD expresses a need for improvement, they are indirectly saying that there is a problem with the current service
- A representative of a primary care trust stated that this would make no difference to the service they receive as an existing user
- A representative of a major user expressed that (s)he felt competition would result in improvement in the service for new connections. (S)he stated it was important to invest in driving competition in connections, as well as improving WPD's own service performance. (S)he felt this was entirely dependent on whether WPD is willing to let some of its market share go

Table 5

- Priority: High / medium
- A representative of a developer stated that this Issue should be a medium priority
- An energy group representative felt that this Issue should be a medium to high priority
- An environmental group representative stated that it depends on how much WPD is relying on new customers or existing customers wanting new connections
- A representative of a developer stated that development timescales are shortening all the time but a particular problem is the length of time waiting for a new connection. The stakeholder stated that by the time the developer has the information concerning the connection (s)he needs to be onsite. This stakeholder added that the situation has improved but needs to improve further

Table 6

- There was an agreement that this Issue should be a medium priority

- A major user stated that effective communications around new connections can be a *'long winded process'*
- An energy group representative felt that generally, there is better communication between utility suppliers than among providers. (S)he stated that it would be good to have a single point of contact
- A major user believed that *'network intelligence'* should be tied into new connections

Table 7

- A representative of a developer was of the view that the current process regarding new connections is *'fine'*. (S)he commented that an improvement could be to have the relevant forms available on the website so that users are able to submit them electronically. This stakeholder stated that new connections, and new houses with new connections, should have a delegated team for when power fails and problems arise
- An energy group representative rated WPD as *'not being the best or worst provider'* but added that they could *'improve and be better'*. (S)he felt that there needs to be more of a clear view of the network
- A local authority officer asked about new connections setup and feels there is a *'mismatch between connections'*

4.3. Issue 3. Being prepared for major emergencies

Table 1

- Priority: High (top three)
- An energy group member made the point that they had no up to date information on this, but that their livelihood is reliant on energy being available and that an act of terrorism would cause his group serious problems
- A business representative said that Electricity Safety Quality and Continuity Regulations have been reiterated since the 2003 storms. (S)he added that there has been a fair amount of chainsaw work on private land to clear trees from around power lines. (S)he asked that when this work goes ahead, WPD should engage better with the landowners, adding *'WPD needs to work towards taking its stakeholders with it'*
- A health care representative said that preparing for major emergencies doesn't deal with the one big problem. (S)he believes that it's all about better management of WPD's *'business as usual'*.
- A business owner made the point that WPD has been *'squeezed hard enough by Ofgem'*. (S)he believes that Ofgem should be more generous, to allow WPD to be more prepared for emergencies. (S)he feels emergency planning has been costed

out and that the national standards are minimum standards. (S)he stated that their group has made Ofgem aware of this

- A business owner believed that it is not enough to build a system which works on the principle of 3Kw of demand
- Another business representative put forward that that WPD has to play *'piggy in the middle'*. (S)he felt that Ofgem should give WPD more money to address this Issue

Table 2

- Priority: High (top three)
- The Issue generated a good deal of debate
- A major user suggested that if WPD was purely looking at the weather, it could predict *'to a certain extent'* but (s)he questioned if there was a *'step before that'*
- The issues of cable and metal theft were raised by several stakeholders and the consensus was to discuss this later in the session
- A major user commented that cable theft could be considered a potential *'every day'* emergency and asked how WPD would deal with this
- A representative from an environmental organisation recommended that WPD should build in a *'resilience'* for the *'stuff you know about'*, can forecast for and *'have enough data to prove it can happen'*
- However, (s)he added that as theft is a more of an *'unknown quantity'*, perhaps WPD should plan less for it, otherwise it could result in the scenario of needing *'two of everything'*
- A representative from an environmental organisation believed that WPD should invest more heavily in being prepared for major emergencies on main sites but that in terms of cable theft, WPD should work on probability and try to *'narrow the risk'* and direct finance towards that
- In response, WPD confirmed it was *'beefing up'* the planning element but asked the stakeholders to what level they should do this in future and whether they should concentrate on medium or high priority sites
- A representative from an environmental organisation recommended that WPD should try to *'eliminate one risk'* on their replacement programme
- A representative from an environmental organisation suggested that WPD should work with other agencies with regard to theft
- Stakeholders discussed the difficulty of policing metal theft as trading was conducted in cash and that as the *'price goes up, the desire to steal increases'*
- A representative from an energy company asked WPD how vulnerable the network was to metal theft

- WPD responded and added that it was working with BT and Network Rail to *'get one step ahead'*
- A representative from an energy company prompted WPD for clarification about what constitutes an emergency and asked if it was when WPD perceived the network to be *'vulnerable'*
- There was consensus among the stakeholders that *'if the power goes down'* that would *'constitute an emergency'* and therefore they considered this Issue to be a high priority
- Stakeholders also considered the need for WPD to find the *'right solution'* and *'put systems in place'* to deal with metal theft

Table 3

- Stakeholders ranked this as a high priority
- An energy group representative felt customers should take some responsibility for making their own systems sustainable
- A representative of a major user felt that education would be important in getting to a point where people can take responsibility. It was commented that electric supply is the most major service and therefore this is a major issue

Table 4

- Stakeholders ranked this as a high (top three) priority
- A local authority officer stated that *'ensuring resilience is essential'*. (S)he felt that being resilient to major emergencies is an *'absolute priority'*
- A representative of a primary care trust felt that although it needed to be addressed, *'being prepared for major emergencies'* is not the most pressing priority
- An elected representative queried what would come under the umbrella of major emergencies, and asked whether things like solar flares would be included
- A representative of WPD clarified that a solar flare would not impact the distribution network, and would predominantly affect super long power lines
- A local authority officer commented that the impact of individual events could be long-lasting
- There was some discussion as to whether emergency planning was focused on the preparation for and avoidance of major emergencies, or on recovery after
- A representative of a major user commented that preparation would come under future proofing, and the cost of mitigation is being passed onto the customer
- A representative of a primary care trust used the example that if someone is on dialysis at home, a cut in power could be a life or death situation. (S)he also

commented that *'if you can deal with the major ones, minor ones won't even cause a blip'*

- An energy group representative said that this work was more about preparation and understanding the risks to key assets, rather than the actual mitigation work when a major event occurs
- A representative of a primary care trust expressed that it did not matter why there was a disruption to service. (S)he expressed a need for regular updates as to what progress had been made to rectify the issue, and when service would be restored, particularly in order to plan for the care of vulnerable people

Table 5

- An energy group representative stated that this should be a high (top three) priority
- An environmental group representative queried whether this Issue was about *'meeting needs or meeting wants'*. Should it be about maintaining the whole system or prioritising what we keep going? The stakeholder used the example *'should WPD prioritise keeping a hospital or a petrol station operating?'*
- A local authority planning officer stated that there is a huge reliance on the electricity network for every aspect of our lives. WPD need to have contingency plans, but it is a case of balancing the focus WPD puts on plans
- There was a group consensus that *'being prepared for major emergencies'* should be a priority

Table 6

- Stakeholders ranked this as a high priority
- An energy group representative felt that the major emergency processes that will be employed in the Midlands need to match Wales and the South West

Table 7

- Priority: High (top three)
- A local authority representative said *'being prepared for major emergencies'* is a massive priority for rural Shropshire. (S)he felt that, at present, it is difficult to react in a timely manner. (S)he commented that an independent group who specialise in utilities help the local authority to *'manage networks, prepare for incidents and give advice on how to make judgement calls'*
- A local authority officer said preparing for an emergency is an issue but not a major one. (S)he commented that plans for the future should be a priority over emergency plans
- A business representative stated that taking risks and not preparing for emergencies could result in *'the whole network being taken down.'* (S)he felt that

now is the right time to address potential future problems and prepare for them through an asset replacement program. (S)he agreed the transmission network has a bigger problem but *'a 1 in 100 year event needs to be planned for'*

- An energy group representative stated deciding what changes/improvements need to be made should be primarily based on the cost
- A local authority officer agreed that decisions made should be cost based. (S)he added that *'all decisions made to be in the public domain'*

4.4. Issue 4. Improving reliability for worst-served customers

Table 1

- Priority: High (top three)
- An energy group member said that their plant in Wolverhampton is on an industrial site. This causes a problem as industrial areas are often turned off at weekends. This happens 4 or 5 times per year
- A business group representative commented that some of their members' lights go dim when they use the kettle

Table 2

- Priority: High
- An elected representative considered that this question was essential, particularly in the case of farmers *'as they rely on electricity for their livelihood'* or hospitals, as *'everything becomes an emergency'* when the supply *'goes down'*
- A representative from an environmental organisation stated that if customers were paying the same, irrespective of their location, then they should *'expect the same service'*
- A major user agreed and added that while (s)he did not know WPD's model, (s)he believed that *'all customers are essential'*
- A major user commented that WPD's customer service was important because outages would mostly affect home connection, as industry, large corporations, etc. should already have emergency alternative power plans in place

Table 3

- Stakeholders ranked this Issue as a medium priority
- A representative of a major user felt that reducing power cuts was a real priority
- An energy group representative felt that, as a rural customer, (s)he experienced a drop in supply when usage increases, however(s)he accepted this as being a result of living in a rural area

- A representative of a major user questioned if users/customers who may be disabled/vulnerable should be considered to a greater extent than worst-served customers. The stakeholder felt that WPD should provide a greater level of support for vulnerable customers as well as *'worst-served customers'* and that instead of *'worst served'* they should be referred to *'vulnerable'* customers.
- An energy group representative commented that many residents living in rural areas expect some level of power *'issue'*; however vulnerable customers need to have a greater level of support

Table 4

- Stakeholders ranked this as a low priority
- A local authority officer felt the priority given to this would depend entirely on what percentage of customers overall would be considered to be worst-served
- A representative of a primary care trust felt that this is more of a business aspiration than a stakeholder priority
- A local authority officer commented that (s)he had experienced a power cut of six hours
- A business group representative felt that this was a moral issue *'we need to provide a safety net for marginalised people'* adding that this is *'a major issue for the vulnerable'*
- A local authority officer stated that it should be a low priority issue for WPD

Table 5

- A local authority planning officer stated that worst-served customers are a small proportion of WPD's customers, and WPD need to find a balance between focusing on worst-served customers and not losing sight of core customer base
- An energy group representative wanted to know if the cost is disproportionate to the volume of customers affected. This stakeholder stated that it should be a low priority
- An environmental group representative stated that individual customers needs to make *'improving reliability for worst-served customers'* important. The stakeholder used the example of a vulnerable customer reliant on electricity
- A local authority planning officer stated that WPD needs to be aware of worst-served customers circumstances
- An energy group representative felt that this Issue should be a low to medium priority
- An environmental group representative asked the question *'how can we support worst-served customers who are in real need more cleverly?'*. The stakeholder

suggested that there should be smarter resilience ideas. The stakeholder used the example of using a dairy farmers electricity backup

- An energy group representative stated that everyone pays the same price so should therefore receive the same service. There was a group agreement on this point

Table 6

- Stakeholders felt that this should be a high priority in rural areas but should be a medium / low priority overall
- An elected representative asked whether WPD could put a figure on the actual number of worst-served customers
- A WPD representative stated that it was difficult to pinpoint a figure due to interconnections, although, generally speaking worst-served customers were located in remote and rural areas

Table 7

- Priority: Low
- A representative of a developer stated (s)he experiences roughly two power cuts a year
- An energy group representative said there needs to be a *'line drawn at what constitutes a worst-served customer.'* (S)he felt it should depend on the level of distribution and costs needed to address the problem. The stakeholder asked whether it is financially viable to improve the service for such a small minority of customers
- A business representative was in disagreement over what defines a worst-served customer and there is no clear *'yes and no answer'*
- A local authority officer stated that solar panels and wind turbines should be used to overcome current problems in the network. (S)he felt that this will improve the service

4.5. Issue 5. Asset replacement to maintain business as usual

Table 1

- Priority: Medium
- A business representative said that WPD should be future proofing whilst it is replacing its assets

Table 2

- It was felt that this Issue was a medium priority
- There was consensus among the stakeholders that Issues 5 and 6 [future proofing] should be discussed together as they were considered to be related

- A representative from an energy company suggested that the keyword should be *'maintain'*
- WPD explained that asset replacement was needed because some assets were coming to end of their lives and not because they were in a bad condition due to neglect
- The WPD representative stated that they were currently faced with a choice and asked stakeholders if WPD should continue with the standard model of replacing *'like for like'*, or future proofing assets for a future need that *'we don't yet know'*
- A major user stated that future proofing was *'very important'* as WPD would get a better return from its assets and because *'that's where it's going to go'*
- A representative from an energy company questioned WPD on how confident they were that what is required *'now'* will be *'needed for the future'*
- A representative of an environmental organisation agreed, adding that 2020 was *'coming at great speed'* and that while WPD might be a *'bit behind'* on infrastructure, it should prepare for the next target
- (S)he added that although replacing *'like for like'* would *'feel like going backwards'*, it made *'sense'* when taking into account the long asset life, and stated it was a *'business risk'*
- A representative from an environmental organisation suggested that Ofgem was *'turning tables'* on WPD about engaging with customers

Table 3

- Stakeholders on table 3 ranked this as a high priority
- An energy group representative felt that careful consideration of assets is required and that assets should be replaced just before they fail
- A local authority officer felt that WPD should not be replacing assets on a reactive basis. The stakeholder felt that the introduction of new kit was a high priority
- A local authority officer felt that kit and equipment that may be coming to the end of its life needs to be assessed and replaced proactively

Table 4

- Stakeholders felt that this Issue should be a medium priority
- An energy group representative made the point that as long as asset replacement fits in the RIIO framework, then it is acceptable to replace assets like-for-like, but any replacement must be considered within that framework
- A representative of a primary care trust commented that it should be considered a priority as a minimum. (S)he also felt that asset replacement is not as important as future proofing, as asset replacement is an inevitability
- A representative of a major user felt that with this issue, picking the right time to replace assets is essential. (S)he also commented that this links to data collection and having a full understanding of the network

Table 5

- Priority: High (top three)
- A representative of a developer stated that if 'asset replacement to maintain business as usual' is not a high priority now then WPD will end up compacting issues later on. The group agreed with this point
- An energy group representative added that the network could be '*smarter*' but realised that this moves into the future proofing category

Table 6

- Stakeholders ranked this as a high (top three) priority

Table 7

- A business representative said as assets get older it is harder to replace like for like
- A representative of developer stated when identifying new areas for development there needs to be a long term strategic plan in place
- A business representative stated '*we can't just assume that because assets are old they are dangerous*'. The stakeholder added that '*if assets are replaced before they run to the end of their life*' it may create problems in the long-term, as failure modes may not be known and WPD will be unaware of how other assets could be affected. Overall failure modes will need to be '*understood*'
- An energy group representative stated it was a '*wrong concept*'. '*In the history of networks there is no like for like but there is always new development.*' (S)he felt Issue 5 was not relevant and Issue 6 was a high priority

4.6. Issue 6. Future proofing asset replacement

Table 1

- Priority: High (top three)
- A health care representative put forward that asset replacement [to maintain business as usual] should be the priority, to reduce the need to future proof
- A business representative disagreed with the health care representative's point. (S)he stated that the Government's policies meant that just looking to replace the asset is the last on a long list of what WPD should be doing
- A business representative referred to growth in the '*wind market*'. (S)he believes that, to deal with the flow of wind energy, WPD needs a reactive network. (S)he stated that WPD will have to '*buy switches that can deal with wind energy*'
- A local authority officer stated that WPD doesn't look where future growth is going to be. (S)he suggested that WPD should look more closely at local authorities' development plans to stay ahead of this
- A local authority officer stated that you can get a firm idea about where development will be coming forward by looking at local plans

- A business owner put forward that WPD makes no difference to bills *'in the real world'* and that WPD's proportion of people's bills is dropping

Table 2

- The group was of the view that this Issue should be a high (top three) priority and this Issue was discussed alongside Issue 5

Table 3

- Stakeholders ranked this as a high priority
- An energy group representative enquired what level/quantity of assets is currently at the lowest level of equipment category in terms of needing replacement

Table 4

- Stakeholders ranked this as a high (top three) priority
- A representative of a major user felt that *'if the incentive is more replacement for the sake of replacement rather than efficiency, then it is counterintuitive'*
- A energy group representative felt that future proofing needs to be *'conceptualised within the wider framework'* of asset replacement
- The stakeholders felt that while this is a high priority, it should not be considered in isolation, and should be measured alongside Issue 5 [asset replacement to maintain business as usual]

Table 5

- Priority: High (top three)
- An energy group representative stated that this should be top of the priority list. The stakeholders were in agreement
- A local authority planning officer stated that electricity infrastructure that is coming to the end of its life needs to be prepared for future energy needs, however (s)he realises that future energy needs are an unknown
- An environmental group representative stated that if WPD does not invest now it will need to spend more at a later date

Table 6

- Stakeholders ranked this as a high (top three) priority
- A business representative stated that future proofing assets is more important than maintenance
- An energy group representative felt that Issues 5, 6, 7 were all linked. (S)he stated that trying to maintain the network will prove tricky as with time it will be

increasingly difficult to predict sources of power generation. (S)he added that the use of technology to maintain existing assets could help stretch present resources in a cost effective way

- Overall it was widely felt across the group of stakeholders that Issues 5,6,7 should be viewed together as a high priority

Table 7

- Priority: High (top three)
- The stakeholders felt that this question should be linked to Issue 5. Overall, it was felt that issue 5 was not relevant and Issue 6 was

4.7. Issue 7. Real time data exchanges and control to enable scheduling of data and storage

Table 1

- Priority: High
- A member of an energy group asked for more clarity from WPD and its partners on this topic
- A business representative stated that this is about enabling demand management
- A health care representative asked if WPD would achieve its desired outcome if the company paid for this. (S)he went on to say that if WPD did not have the information flow, the data management won't work

Table 2

- It was generally felt that this issue was a high priority for WPD
- A representative from an energy company commented that his / her understanding was that the higher voltage will *'have that information'* ; therefore it was the *'bit in-between'* that the WPD needed to concentrate on
- A major user believed it was *'fundamental'* to have an information flow to work out demand, and therefore it was all *'interlinked'*; adding that *'unless you know, how can you plan?'*
- A representative from an energy company agreed and added that controls were required to help work out the demand *'peaks and troughs'*; adding it was *'fundamental to the business'*
- A representative from an environmental organisation stated that he / she did not consider that this question was as *'important to the customer'* as to WPD
- Conversely, a representative from an energy company believed it could be a regarded as a cost saving to the customer if WPD used assets *'more efficiently'*

- An elected representative stated that WPD *'must invest in future'* and that *'everything comes at a cost - we know that'*
- WPD was asked if, now there was more customer information available and more generation to network, it saw a changing role for distribution companies
- A representative from an energy company made the point that while it was a *'balancing act'* for companies to optimise generation, WPD should not look at building a new network but use its existing one *'better'*

Table 3

- Stakeholders felt that this should be a medium priority
- A representative of a major user asked if instances of accidents are looked at for possible sequences, adding *'is the capital expenditure of other users, both domestic and international, looked at to get an idea of what is likely to happen in the future?'*
- An energy group representative asked if WPD engages with developers and other stakeholder, such as Wind Farm providers, to get an idea of infrastructure or issues that stakeholders have uncovered which could then save WPD time or money

Table 4

- Stakeholders ranked this as a medium priority
- A business group representative commented that the area of data collection is vast, and it must be focused on and harnessed to develop WPD services
- A representative of a primary care trust felt that future proofing would enable this to happen

Table 5

- Priority: Medium / low
- An energy group representative stated that future proofing is a sub-set of Issue 7. The stakeholder suggested that (s)he wouldn't jump on an individual solution but more of a *'catch all category'* of future proofing
- A local authority planning officer felt that *'real time data exchanges and control to enable scheduling of data and storage'* works hand in hand with improving communications. The stakeholder suggested that if WPD wants to improve customer communication then this priority could assist WPD
- An energy group representative stated that smart metering will provide the necessary real time data, therefore there is no need for network monitoring
- Another energy group representative stated that *'if everything is ok most of the time data is not important but it is important when there is a problem or an emergency'*

Table 6

- Stakeholders ranked this as a high priority
- An energy group representative felt that smart meters should operate on a centralised meter system across the country. (S)he also added that it was difficult for people to be *'smart'* about energy usage whilst retail suppliers were trying to retain control over usage through tariffs. (S)he felt that the lack of clarity on how to manage this area systematically is a *'big mess'* at present
- The group agreed that this was set to be very important in the future

Table 7

- Priority: High
- A business representative felt that smart grids are needed. (S)he felt that the decision as to whether they are needed is a political one which should be debated. (S)he asked *'would data be of value?'*

4.8. Issue 8. Metal theft prevention / response**Table 1**

- Priority: High
- A business representative stated that his group was 100% behind WPD's efforts to reduce metal thefts. (S)he added that it was an epidemic

Table 2

- The group deemed this issue as being a high (top three) priority and this was discussed along with Issue 3 [being prepared for major emergencies]

Table 3

- Stakeholders felt that this should be a medium priority
- A representative of a major user felt that metal theft is a massive problem in his/her industry. (S)he felt that WPD should look at other initiatives like fibre optic cabling to reduce the instances of metal theft
- An energy group representative felt that the Government needs to do more to better police metal theft
- An elected representative felt that this isn't a major issue as the price of metal will drop in years to come. The stakeholder added that major investments should not be undertaken, as this won't be a massive issue in years to come
- A local authority officer felt the Government should be forced to do more to reduce this problem. Felt that this isn't the highest priority but should be considered as an issue

- A representative of a major user felt that the Government is required to look into this and assess the national implications

Table 4

- Stakeholders felt that this should be a medium priority
- A representative of a primary care trust expressed that the interruption in supply is the bigger issue, and questioned whether there was a way to protect against theft
- A representative of a major user queried whether increased security would prove effective. (S)he felt that future proofing should protect these assets
- A representative of a primary care trust suggested that if WPD isn't already, it should look to work with police to review what can be done
- A representative of a major user felt that investing in prevention of theft is a waste, that it would be more effective to focus effort on removing the market for the stolen metal. (S)he stated that, for this reason, it should be a low priority
- A representative of a primary care trust echoed the need for WPD to engage with police in order to clamp down on scrap dealers
- A business group representative commented that the level of priority would depend on whether the metal being stolen was just from lines, or from substations
- The stakeholders concluded that although metal theft is an issue that needs to be addressed, it is not a high priority compared to others

Table 5

- Priority: High (top three)
- A local authority planning officer stated that WPD should *'nip it in the bud now'*. The stakeholder added that WPD should pressure the Government to legislate the issue
- It was suggested that *'metal theft prevention / response'* should be a high priority- but the bottom end of the high priority scale
- A local authority planning officer stated that customer impact makes it a priority

Table 6

- The stakeholders felt that this Issue is a high priority at the moment but might change in the near future
- The facilitator asked the group whether they felt there is a need for WPD to lobby the Government to prevent metal theft
- The group agreed that this was important

- A local authority officer pointed out that by the time that national legislation comes into force the price of metal might have fallen
- An energy group representative felt that metal theft could be a priority especially as there are several fatalities every year and also *'third party risk'*
- A business representative stated that metal theft was a national epidemic and that the local authorities, police and national Government needed to start thinking *'outside the box'* to help tackle this issue
- The stakeholders agreed that metal theft was an immediate priority but might not be in the future

Table 7

- Priority: High
- A business representative stated power cuts will allow more metal thefts to take place
- Another business representative commented that metal thefts result in customers being underserved and that rural households will suffer the most. The stakeholder felt that to decide if there needs to be investment to prevent metal thefts *'the amount of return needs to be greater than the amount invested'*
- A local authority officer stated that customers who have suffered power outages due to metal thefts over a long period of time have taken action by looking at other methods of getting power. (S)he feels it is no longer a priority to underserved customers

4.9. Additional comments

Table 1

- The Issue of improved communication and greater transparency was suggested for inclusion on the priority list
- A health care representative stated that WPD should put emphasis on transparency and the availability of current information
- Reducing power cuts was also suggested as a further priority Issue

Table 2

- While there was universal agreement that all eight questions were a priority of varying degrees there was much debate concerning what should be the top three priorities
- Reducing power cuts was seen as being an important networks priority
- A representative from an energy company stated that data exchange should be the most important, while a representative from an environmental company, a

representative from an environmental organisation and an elected representative considered the top priority Issue to be future proofing

- A representative from an energy company, a representative from an environmental company and an elected representative believed that 'being prepared for major emergencies' was a very high priority

Table 3

- The stakeholders on Table 3 had no further comments to make

Table 4

- Stakeholders wanted to include increasing competition as an additional priority
- A representative of a major user felt strongly that WPD should focus on increasing competition. (S)he stated that DNOs currently have a monopoly, and (s)he queried why increasing competition had not been included in this list. *'Currently DNOs are under pressure to facilitate open competition in connections, so it should be featured. If WPD focuses on meeting the requirement, it won't need to be a priority. Not meeting this requirement will be penalised, so it is in WPD's interest to do it now.'* (S)he then used the example that of a streetlight replacing scheme that is now open to competition. It was felt that the DNO needs to facilitate and extend this type of working. *'Customers need to know they can stimulate the demand for competition'*
- A representative of a primary care trust commented that increased competition will enable services to become *'customer focused and customer driven'*
- A representative of a major user stated that WPD needs to support developments itself, in order to contribute to the technologies that it will benefit from
- An energy group representative expressed that it is not always apparent how R and D benefits the end user, so this needs to be seen
- A representative of a major user stated that WPD will only benefit from the improvements if it engages with new technology and research. (S)he felt that R and D needs to be a priority
- A business group representative agreed, adding *'how do you know its future proof if you don't look at new technology?'*
- There was consensus among the stakeholders that R and D should be a high priority for WPD as it is a core factor in the progress of the other issues addressed here, and that this Issue should be coupled with 'future proofing'
- A representative of a major user stated that future proofing is funded by customers. (S)he commented that DNOs need demand to improve services, as network growth happens as demand improves

- An elected representative commented *'I'm more interested in delivery to my community. My concern is access to information, how the customer benefits, and who resources this'*
- A business group representative queried whether standardising processes following the Central Networks transfer to WPD should be included in these priorities

Table 5

- There was a group consensus that reducing power cuts should be priority
- An energy group representative stated that WPD's current customer relationship is reactive and it should become proactive. This stakeholder suggested that WPD should be informing customers of impending works such as road works. This stakeholder added that there is an expectation among customers that they can access the relevant information on smart phones and the internet
- A local authority planning officer stated that customers have little knowledge of who WPD is
- A major user representative stated that it would be useful to have more notification of any disruptions, particularly to local businesses and organisations. The stakeholder suggested a months warning would be sufficient
- It was added that WPD needs to have a better relationship with local authority planning officers and departments
- Another local authority planning officer stated that it is important for planning departments to have the right channels to have those discussions with WPD

Table 6

- The facilitator asked the group whether they felt there is a need for WPD to lobby the Government to prevent metal theft
- The group agreed that this was important
- A local authority officer pointed out that by the time that national legislation comes into force the price of metal might have fallen
- An energy group representative felt that metal theft could be a priority especially as there are several fatalities every year and also third party risk
- A business representative stated that metal theft was a national epidemic and that the local authorities, police and national Government needed to start thinking *'outside the box'* to help tackle this issue
- A local authority officer stated that it is important to consider where houses are being built to ensure that there is adequate capacity on the network in the area
- An energy group representative noted that the energy industry is undergoing a decline in the *'job for life'* culture. Traditional *'lifelong'* engineers who have an

unrivalled level of expertise in their field are fast disappearing. (S)he believed that WPD needs to be prepared to develop the appropriate technology tools to compensate for this. (S)he also stated that effective apprenticeships should help keep the expertise alive

- The point was made that cutting edge communication mediums do not necessarily reflect the communication habits of the general population and reliable forms of communication are more important and effective

Table 7

- A local authority officer said in emergencies there is normally a *'back up plan'*. (S)he asked *'when a potential problem is 1 in 100 is it worth designing the whole network around it?'*
- Reducing power cuts was put forward as an additional priority for WPD

5. Prioritisation

5.1. Improving customer service and the network

Stakeholders we first asked if they considered that each of the Issues should be a priority for WPD.

Priority	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7
New/innovative methods of communication	Y	Y	Y	Y	Y	Y	N
Improving service for new connections	Y	Y	Y	Y	Y	Y	Y
Being prepared for major emergencies	Y	Y	Y	Y	Y	Y	Y
Improving reliability for worst served-customers	Y	Y	Y/N	Y	Y	N	N
Asset replacement to maintain business as usual	Y	Y	Y	Y	Y	Y	N
Future proofing asset replacement	Y	Y	Y	Y	Y	Y	Y
Real time data exchanges and control to enable scheduling of data and storage	Y	Y	Y	Y	Y	Y	Y
Metal theft prevention / response	Y	Y	Y	Y	Y	Y/N	Y
Reducing power cuts	Y	Y	Y	Y	Y	N/A	Y
More transparency	Y	N/A	Y	N/A	N/A	N/A	N/A
Research and development	N/A	N/A	N/A	Y	N/A	Y	N/A
More competition for new connections	N/A	N/A	N/A	Y	N/A	N/A	N/A
Proactive customer relationships	N/A	N/A	N/A	N/A	Y	N/A	N/A

6. Workshop 2: Innovation and the Environment

6.1. Issue 1. Use innovation to support existing network and operate it more effectively

Table 1

- Priority: High (along with Issues 2,3 and 4)
- A business representative stated that the rural network was an elephant in the room as it simply isn't adequate at present
- An energy group representative stated that upgrades, even in urban areas, are not cheap
- A health care representative stated that it would be better if stakeholders could contribute to capacity and availability. (S)he put forward that the long term strategy needs to not look beyond 2015
- Attendees agreed that they want WPD to encourage local networks to have generators which generate for the network rather than just for the demand of the local area
- An energy group member stated that people must be encouraged to generate their own energy
- A local authority officer stated that the Government has targets for houses to be zero carbon
- An energy group member said the Government needs to encourage zero carbon and that the Government's thinking is *'not always joined up'*

Table 2

- The group was of the view that this Issue should be a high priority for WPD
- It was felt that Issues 1 - 4 should be discussed together A representative from an energy company stated that WPD could not afford the *'£35 billion to replace the entire network'* and it was *'forced into a corner'* over Question 4, adding that it was a *'top priority'* in order that WPD could *'drive more down the network'*
- A major user responded that (s)he *'did not have any problems'* with Questions 1, 2 and 4, but recommended that for Question 3 (trailing technology) WPD should *'contribute'* to trials conducted by other agencies/companies rather than invest in its own

- A representative from an energy company asked what priority Question 3 should be as trialling was *'great in four out of ten projects'* but *'not a high priority'* and *'perhaps more medium'* but then WPD *'would be danger if then nobody does it'*

Table 3

- Stakeholders ranked this Issue as a high priority
- A local authority officer enquired if WPD had looked at more locally generated power to service users in the area as a future initiative. (S)he felt this could be a major issue. This stakeholder stated that it would be beneficial to try and set the agenda rather than follow it
- A representative of a major user felt *'horizon scanning'* was important going forward

Table 4

- The group discussed Issues 1 – 4 as a single Issue
- The conversation centred on WPDs approach to replacing and upgrading its network. The consensus view was that it was difficult to predict the future so an incremental and *'piecemeal'* approach was the best way to do this

Table 5

- There was a group consensus that this Issue should be a priority along with Issues 2,3 and 4

Table 6

- The stakeholders decided to group the first four questions because they felt that these were closely linked
- The stakeholders also felt that these were discussed in some detail in the previous session, and accordingly agreed that these were all a high priority

Table 7

- A representative of a major user stated that the use of innovation to support the existing network and operate it more effectively is *'very important'*. This stakeholder felt that experts in specialised areas are getting older and there are not enough trained or experienced younger people to take over. (S)he felt that the training new employees receive is not effective enough. (S)he added that it needs to be highlighted that WPD is only future proofing its assets and not educating their staff with the skills and knowledge needed to keep the network running smoothly
- A business representative believed that there is too much focus on cost and not enough on innovation

6.2. Issue 2. Develop technologies to accommodate increases in electricity demand

Table 1

- This Issue was discussed along with Issues 1, 3 and 4

Table 2

- This Issue was discussed along with Issues 1, and 4 and was considered high priority

Table 3

- Stakeholders viewed this Issue as being a low priority
- An energy group representative felt that innovation comes from asset replacement, things like electric vehicles have resulted in us having to innovate more as *'we didn't know where we'd be in the future'*. The stakeholder suggested that there needs to be a big rethink in the way electricity is used and produced

Table 4

- This Issue was discussed along with Issues 1, 3 and 4

Table 5

- An energy group representative stated that the Issue should be worded *'develop solutions to accommodate increases in electricity demand'*. The stakeholder stated that technology is the enabler and can come be a commercial solution
- A local authority planning officer agreed with this point, and added that the technology *'may be out there but not in use by WPD'*
- An environmental group representative stated that this Issue is only about meeting electricity demand. This stakeholder suggested that WPD should be encouraging manufacturers to produce more efficient products rather than products such as plasma televisions. The stakeholder would like WPD to have a role in discouraging technology coming to the market that requires more electricity
- A representative of a developer stated that it is not WPD's responsibility to develop technologies but implement and trial new ones
- An energy group representative stated that technology providers need to know what challenges WPD are facing
- A local authority planning officer suggested that the priority should be rephrased as *'identify solutions / identify issues to accommodate increases in electricity demand.'*
- An energy group representative stated that manufacturers need to know what issues there are to develop technologies accordingly

- A representative of a developer stated that increase in demand should not be the sole driver of innovation
- A stakeholder stated that WPD needs to have a role in offering energy efficiency advice
- An environmental group representative stated that WPD could lobby or advise the Government about energy efficient products

Table 6

- Stakeholders ranked this as a high priority, along with Issues 1,3 and 4

Table 7

- A major user asked who should develop the technology, *'should it be third parties such as universities or WPD?'* At present WPD is not developing products, instead it is following others. (S)he stated WPD should focus more on innovation and rather than following others should take a leading role

6.3. Issue 3. Trial technology and innovation to facilitate low carbon networks

Table 1

- This Issue was discussed along with Issues 1,2 and 4, all of which were deemed high priority

Table 2

- This was discussed along with Issue 1, 2 and 4. However, stakeholders felt that this Issue was only a medium priority

Table 3

- A representative of a major user stated that looking at innovation is important, so should *'not to be left behind'*. However, the group as a whole saw this as being a low priority Issue

Table 4

- This Issue was discussed along with Issues 1,2 and 4

Table 5

- This Issue was discussed along with Issues 1,2 and 4

Table 6

- Stakeholders ranked this as a high priority

Table 7

- Stakeholders ranked this as a high priority

6.4. Issue 4. Turn successful trials into business as usual techniques / products

Table 1

- This Issue was discussed along with Issues 1 – 3. The comments from this table are shown above

Table 2

- This Issue was discussed along with Issues 1 – 3. The comments from this table are shown above

Table 3

- This Issue was discussed along with Issues 1 – 3. The comments from this table are shown above

Table 4

- This Issue was discussed along with Issues 1 – 3. The comments from this table are shown above

Table 5

- This Issue was discussed along with Issues 1 – 3. The comments from this table are shown above

Table 6

- This Issues was discussed along with Issues 1 – 3. The comments from this table are shown above

Table 7

- This Issue was discussed along with Issues 1 – 3. The comments from this table are shown above

6.5. Issue 5. Making better use of the current system capacity – e.g. Substation monitoring and Dynamic asset rating (allow us to use existing lines and cables more efficiently)

Table 1

- Priority: High (top three)
- A health care representative stated that innovation should follow *'after the better use of the current network'*

Table 2

- The group felt strongly that this was a high (top three) priority Issue. They were also keen that this was linked to Issue 4

Table 3

- Stakeholders were in agreement that this is a high priority
- An energy group representative felt that customers usage can't be altered, affected or influenced

Table 4

- The stakeholders were immediately in agreement that this is a high (top three) priority issue

Table 5

- There was a group consensus that this Issue should be ranked high (top three) priority
- A local authority planning officer wanted to know if this would include overhead lines at the end of their life. The stakeholder also questioned whether it would be more cost efficient / energy efficient to implement underground cabling rather than over head cables

Table 6

- Stakeholders ranked this as a high (top three) priority
- A WPD representative summarised this by briefly explaining that the network can be maximised by understanding it better and using it in a more efficient way
- A business representative asked whether WPD had the ability to gain further insight into substation activities
- A WPD expert stated that as WPD engineers *'move down the voltage chain'* they begin to lack insight. (S)he added further insight was possible through investment into technology and WPD would have the ability to draw upon real-time information on a more localised network
- An energy group representative explained that transformers built 50 years ago were built with twice the required capacity compared to present day models, which are built with 5-10% additional capacity for cost reasons. (S)he added that new assets have technology built into them to prevent transformers from running over capacity. (S)he continued that WPD was trialling smart boxes to further monitor usage at present and if successful WPD will roll them out in the near future
- A local authority officer expressed concern about the possibility of the theft of smart boxes

- An energy group representative explained that other concerns about smart meters include hacking, costs and the carbon footprint caused by the installation of the boxes
- The Facilitator framed the discussion by adding that the Government wants everyone to have smart meter technology to conserve power more carefully and in the mid to long-term it will ultimately cost the consumer more
- An energy group representative stated that it was possible to either generate more or save energy and if it is not possible, to ask people to be more shrewd with their usage. If that can not happen then it will have to be *'forced upon them'* through pricing mechanisms regulated by national Government
- A business representative stated that it was less a case of *'being forced'* and more that the network was unable to cope with increasing demand. The stakeholder added that the problem remains that extending capacity is very expensive
- An energy group representative felt that the national grid was *'still in the dark ages'* and desperately needs to update its infrastructure

Table 7

- A business representative stated that this area should have some investment which will result in a *'low cost win'*
- An energy group representative asked *'shouldn't this action be done anyway?'* (S)he thought there needs to be more investment in understanding how lines and cables can be used more efficiently
- Hotter and cooler air dynamics were explained by the WPD representative
- A local authority officer stated the *'existing systems can continue to be used'* but to improve in the future there needs to be *'extra bolt ons and developments made'*

6.6. Issue 6. Smart technology and telecommunications – new installation of network that allows remote data monitoring and operation of assets

Table 1

- Priority: High (top three)
- A health care representative stated that this should be developed off the back of what is available now and then new products should be brought forward. WPD should not try to provide telecommunication services. It should focus on making use of the current system
- A health care representative suggested that it is about getting high voltage fixed first, and then lower voltage. (S)he believes that WPD needs to *'start higher up the network, where the flexibility is'*

Table 2

- Priority: High (top three)
- A representative from an energy company considered this Issue *'overlapped'* with Issues discussed in the first workshop
- A major user stated that a *'smart grid project'* for WPD's core network was *'very intelligent'* and that it is about *'taking it to the next level of network'* as new energy levels were low level voltage and all current intelligence was about high level voltage so Q6 was an *'essential thing'*

Table 3

- Stakeholders were in agreement that this is a high priority
- An elected representative stated that if WPD successfully data monitored customers then it may be possible to tailor their usage to critical times to ensure that supply is constant. The stakeholder suggested that this could be achieved through penalties or incentives by suppliers

Table 4

- Priority: High (top three)
- An energy group representative stated this should be of medium priority. The stakeholder added *'can't say it's a high priority until you know who is responsible (for delivery). It's an industry investment, not just the DNO alone.'* (S)he also commented that as consumers pay for this, it is essential that the sector is accountable
- The consensus was, however, that this Issue should be considered high (top three) priority

Table 5

- Priority: High (top three)
- An energy group representative stated that WPDs need to have a reason for smart technology installation and not just for the *'sake of it'*. The stakeholder felt that the reason is the important part of this Issue. If WPD is clear about why they are putting it in then it should be a high priority, but if it is just for the sake of it is a medium priority
- An energy group representative stated that smart technology and telecommunications will not solve the problem but will help with visibility so WPD can implement change
- Another energy group representative added that if WPD wants to use the existing grid to maximum capacity then it wouldn't know where to start without smart technology and telecommunications

- An energy group representative stated that it comes down to scale. WPD wouldn't need to do it across the whole network but a small trial area to see what the problems are
- The stakeholders felt that *'smart technology and telecommunications'* should be a high priority, with the exception of one energy group representative would like to see it as a medium priority

Table 6

- Priority: High (top three)
- The Facilitator asked the group what impact they thought smart technology will have on local renewable energy
- A WPD representative stated that if stakeholders did not have this as a priority the opportunity to solve the problem would be lost. If the group decided that it was not a priority it must decide how future demand will be met
- An energy group representative felt that the Government's solution was inadequate
- A local authority officer stated that many people were interested in green energy but disliked wind farms
- The general consensus suggested that WPD should consider collaborating with greener energy service providers
- A local authority officer stated that local authorities producing core strategies could demand that some of the energy sources for these houses are *'green'*
- The stakeholders agreed that at a strategic level WPD needs to engage with users to help devise strategies, however, this also largely depends on future market demand

Table 7

- Priority: High (top three)
- A local authority officer stated that (s)he liked the concept of real time information
- A business representative said the key to responding to emergencies is through the use of smart technology. (S)he felt smart technology is likely to have a positive impact on badly served customers. (S)he went on to say engineers will still be needed as *'sending a technician to the problem saves times rather than relying on new technology'*

6.7. Issue 7. Facilitating the connection of local renewable energy – e.g. impact of solar panels and 2-way flows to network

Table 1

- Priority: High (top three)
- A business representative stated that they was agnostic about local power generation
- A member of an energy group said that $\frac{3}{4}$ of the power is lost in transmission. A business representative stated that this fact was incorrect
- A business representative suggested that WPD could get up to 75% efficiency if power is used where it's generated
- An energy group member suggested that the issue is not about generation at the power station, but that the issue is about what's being lost in the connections. This makes power stations look bad, but it's not their fault
- An energy group representative stated that the UK deals with power in *'quite an old fashioned way'*

Table 2

- Priority: High
- An officer of a local authority highlighted the point that WPD had *'no choice'* but to make this a priority in order to comply with current Government planning policy guidelines
- A representative from an environmental organisation added that it *'kind of fits'* into the Localism Bill concerning the way of generating and storing electricity locally
- A representative from an environmental organisation asked WPD if there were any opportunities for the company to *'feed into the new grid'* and what *'influence'* it had
- A representative from an environmental organisation added that there were two problems in terms of maintaining the existing network and also having to deal with ad hoc add-ons; (s)he went on to ask WPD if Ofgem needed to be influenced on the *'way to form business plans'*
- A representative from an energy company asked how renewables should be funded, adding *'although it was important, should WPD or the distribution companies fund it?'*

Table 3

- Stakeholders were in agreement that this is a high (top three) priority

- A WPD representative discussed this issue and all stakeholders were content that this was a high priority going forward, although it was felt that it is dependent on Government and technology
- An energy group representative felt that solar power was only a minor issue several years ago and only became a big issue following Government intervention

Table 4

- The stakeholders felt that this should be a high (top three) priority
- A representative of a major user felt that implementation of this would be entirely dependent on the cost to the customer
- An energy group representative questioned whether this really benefits the customer. (S)he felt that the value would depend on the end benefit to the customer
- An elected representative commented on the carbon emissions of new technologies. (S)he stated that it didn't seem to return enough to warrant such a big government investment
- The stakeholders agreed that there is seemingly no guarantee of continuity, and it is unclear what would happen if scheme was removed
- It was stated a few times that the pursuit of two-way flows would be dependent on how cost effective it is for WPD
- The stakeholders also agreed that there needs to be a cost to take in supply to the network with a large number of small scale generators
- A business group representative shared the case of the ARBED energy scheme in Wales, where some housing associations have put in sections of solar panels where new homes have been built. (S)he stated that if there is ever a heat wave, there is a potential for issues to arise. (S)he also commented that the need to develop these technologies would be dependent on the take up and usage
- A representative of a major user added that the need to develop this would depend on how the network is responding. *'Until DNOs have the data to know what demand is, it can't be developed.'* (S)he also stated that WPD needs to invest in the development of efficient solutions for any issues that may arise

Table 5

- There was a group consensus that this should be a high (top three) priority

Table 6

- Stakeholders ranked this as a high (top three) priority

Table 7

- Priority: High (top three)
- A representative of a developer said that since the introduction of silver solar panels, *'a problem has arisen of housing associations squeezing power back into the network had arisen'*
- A representative of a developer said the main priority is to understand the implications and problems renewable energy can cause. (S)he thinks investment is needed for research to be carried out. (S)he stated that *'reading the future is important if we are presuming the future is dangerous and expensive'*

6.8. Issue 8. Facilitating electric vehicle charging infrastructure

Table 1

- Priority: Low
- A member of an energy group stated that he was surprised about how much energy electric cars use. (S)he stated that if residents on a whole estate all buy electric cars WPD may run into a real problem
- An AONB officer asked if electric cars could generate their own electricity. A local authority officer stated that this would be impossible
- An AONB Officer asked if America uses more electric cars and if so, how do they deal with it
- An energy group member stated that it was for the Government to prioritise this issue
- A business representative stated that (s)he doesn't believe in the Government's targets for electric cars. (S)he added that heat pumps will take off in a bigger way

Table 2

- Priority: Medium
- A representative from an environmental organisation suggested that Question 8 was a bit like gas LPG vehicles which *'didn't really take off'* and this was a *'bit chicken and egg'* and could be an expensive investment
- A representative from an energy company asked WPD if the Government was subsidising electric vehicles (EVs). WPD confirmed this and a representative from an energy company added that without the subsidies it would not have *'a real push'*
- Several stakeholders stated that battery technology was the *'major driver'* in making EVs more effective and any difficulty in charging EVs would be a barrier to sales; a representative from an environmental organisation added that there should be an incentive from EV manufacturers

- A major user considered that it came *'back to the business plan'* of how to get EV users to come to a central charging place so WPD does not have *'do something'* with the load; adding that there was *'more to it than EV charging in the street'* and that there *'lots of big things to deal with'*
- A representative of an energy company added that there would be a *'complicated relationship'* with the energy supplier and that perhaps there was an element of doing it in a *'targeted way'* by working with local authorities
- However (s)he considered that EVs in rural areas would probably not fit in the same timeframe adding that if WPD was thinking of an early roll-out of infrastructure then it should work with other agencies, but if WPD was intending to *'go it alone'* then it could be a *'struggle'*

Table 3

- Stakeholders ranked this Issue as a low priority
- An elected representative enquired whether there was actually an appetite for electric cars now or in the future. The stakeholder also felt that there wasn't support in place yet
- A representative of a major user stated that the technology does not yet exist to make it easy to use the technology. This stakeholder added that there is not the capacity for charging units at most locations
- A local authority officer stated that *'the cost still outweighed the benefits'*
- An elected representative stated that the Government has to do more to incentivise the manufacturers. WPD could look at introducing charging points at supermarkets; however this system wouldn't pay
- An elected representative commented that the Government needs to provide more direction
- A local authority officer felt that this is a really fast moving technology and in the future if battery technology improved it could make a big difference. However, currently EV's are not a viable alternative and should stay as a low priority
- An energy group representative suggested that perhaps money could be put into research rather than developing charging points. The stakeholder stated that a contingency fund would be beneficial going forward

Table 4

- Stakeholders felt that this should be a medium priority
- The stakeholders discussed this issue in depth and were very undecided about where this sits in relation to the other issues raised
- An elected representative questioned how much power is needed for a single charge in an electric vehicle

- A representative of a major user informed the other stakeholders that it takes no more energy than an additional electric shower. However, (s)he did make the point that although electric vehicles don't take an large amount of power, it is continuous while the car is charging. If everyone was to get one, and all decided to charge at once, it could present a problem to the network. (S)he added that DNOs should be realistic about their investment
- A representative of a primary care trust observed *'it's a chicken and egg scenario* – DNOs will not invest in the infrastructure until people switch to electric vehicles, but people are unlikely to switch until the infrastructure is in place
- A business group representative highlighted the risk of early overinvestment. (S)he felt that focusing on this issue should not be a priority until there is take up of electric vehicles from the public
- An energy group representative noted that at the moment it is unclear what type of electric car manufacturers will develop, as there are so many potential options, making it difficult to prepare for the switch. (S)he observed that the hybrid model is likely to be the main focus for manufacturers
- A representative of a major user echoed this, commenting that most manufacturers will soon start producing a type of electric vehicle, likely to be the hybrid
- A business group representative stated that the development of the infrastructure is dependent on further RND, while adding that DNOs must support demand as it increases
- A representative of a primary care trust commented that at the moment, electric cars are not functional and are *'expensive and impractical'*
- A representative of a major user stated that infrastructure for electric vehicles' is not needed at the moment. As the technology is still being developed, DNOs should focus on keeping connection costs down, as the existing technology may not end up being used in the market place
- An energy group representative disagreed, commenting that although it's a potential scenario, it is unlikely to be the case
- A representative of a major user added that DNOs do need to facilitate the *existing* demand, and this should be a high priority. The infrastructure must be made accessible, and make it possible for demand to increase. (S)he stressed the need for DNOs to facilitate (not necessarily invest), otherwise the technology will never emerge
- A business group representative queried whether this Issue would present an opportunity to take advantage of the low carbon network fund
- A representative of a local authority made the observation that having a high profile spokesperson to push the technology could boost uptake

- A representative of a major user added that the cost effectiveness should have a big impact on WPD's investment in this technology

Table 5

- The stakeholders stated that the 'facilitating electric vehicle charging infrastructure' should be a low priority for WPD
- An energy group representative stated that *'facilitating electric vehicle charging infrastructure'* should also be about controlling measures and reinforcement, there are subtleties around the Issue
- A local authority planning officer stated that EV is something that WPD is going to have to *'keep an ear to the ground'* about. It was added that proposed technologies can be superseded by other technologies. The stakeholder used the example of hydro cars. What happens if WPD put the infrastructure in and then EV becomes defunct
- An environmental group representative stated that the issue for WPD is *'should you be facilitating the infrastructure or should it be other people's problem'*
- A representative of a developer stated that (s)he thinks that a new technology will come along and replace EV
- An environmental group representative stated that this Issue could be linked with Issue 6, as the vehicle could be used as a storage facility. When not using the vehicle, the electricity could be sold back to the grid. The stakeholder stated that (s)he thinks storage is going to be a future problem

Table 6

- Stakeholders ranked this as a medium priority
- An energy group representative stated that there was a slow uptake on the purchase of electric vehicles because *'the Government isn't doing a very good job of selling the idea'*

Table 7

- Priority: Low
- A representative of a developer stated that only a few people are currently using electric vehicles and this shows there is *'no heavy demand at the moment'*. (S)he said *'we should start to get ready to respond when the electric infrastructure gets to a tipping point'*
- A business representative said it is difficult to gauge when we will be at that *'tipping point'*
- A representative of a major user stated that chargers are exclusively based at home or work, therefore it is not a priority for WPD as there is no current demand for chargers

- A representative of a developer stated that engineering for electric vehicles will need to be more responsive in the future
- A major user said we don't always know what *'future needs will be'*
- A stakeholder stated that WPD should lay the groundwork for the future need of electric vehicles but not make any investment
- A business representative felt preparing for the future is hard as *'we cannot guarantee what we need to plan for'*
- An energy group representative stated it is *'£1 a night to charge a car, on night rates.'* (S)he commented that *'rates could go up if demand increases'*

6.9. Issue 9. Minimising leaks from fluid filled cables and gas filled switchgear

Table 1

- Priority: Medium
- A health care representative stated that this should be business as usual
- An energy group member commented that this was WPDs current problem
- A local authority officer asked how much of a problem this is and stated that this is a small problem in the scheme of things
- A business representative asked WPD to think about how much undergrounding it could do if it ignored this problem
- A business representative asked if WPD could get engineers to plan maintenance and added that WPD shouldn't replace cables for the sake of replacing them
- An energy group member stated this should just be done

Table 2

- Priority: High
- A representative from an energy company asked WPD if, when they asked about environmental issues, this was *'over and above'* their legal requirements; WPD confirmed this was the case
- A representative from an energy company asked WPD what proportion of the network was gas filled cables and a major user asked what the duration of the cables' life was and why
- A representative from an environmental organisation commented that if WPD it had assessed the risks, put measures and processes in place and was confident it could be deal with an environmental incident then that was *'manageable'* as WPD could

not replace the entire network; (s)he added that, however, it would still *'probably be good'* to identify the risks quicker

- A representative from an energy company asked WPD what the fines were, adding that although it was important for WPD to look into the future, (s)he did not consider it *'fundamental'* to getting a better network if it was already being managed in an acceptable way

Table 3

- Stakeholders ranked this as a medium to high priority
- A representative of a major user stated that this has to be undertaken, as without it litigation would follow. The stakeholder stated that it is important to measure the risk and cost and then decide if action is required, and the likelihood of further accidents happening in the future
- An energy group representative stated it is important to assess how much of a problem this is prior to deciding if it is a priority

Table 4

- Priority: Medium / low
- The stakeholders felt that 'minimising' shouldn't be a priority, but replacement should be a priority
- An elected representative observed that leaks have the potential to be dangerous, so the focus given to this would depend on how frequently leaks occur
- A representative from WPD informed the stakeholders that leaks occur infrequently
- A business group representative added that replacement will need to happen at some point. (S)he queried whether it would be best for WPD to do this *'piece by piece or wait to do it all at once'*. (S)he added that WPD needs to make a calculated decision by understanding whether it will be more cost effective to implement replacements in five years' time, or whether it is better to mitigate the risk now
- A business group representative felt that while minimising leaks is not a priority, replacement of potentially problematic lines should be

Table 5

- The stakeholders were in agreement that this should be a medium priority
- A local authority planning officer stated that the number of incidents of leaks is low, so it is a case of replacing *'as and when'*
- A stakeholder suggested that this Issue could increase in need in the future with the changing climate

- A representative of a developer queried whether 'minimising leaks from fluid filled cables and gas filled switchgear' is a legal requirement anyway
- A local authority planning officer suggested that over time it won't be such a problem with asset replacement
- A representative of a major user stated that WPD should be looking at replacement gases for SF6
- An energy group representative stated that this goes back to identifying the issues and developing new technologies for a solution

Table 6

- Stakeholders felt that this should be ranked as a medium priority. It should be noted that stakeholders thought it less important than facilitating electric vehicles
- A WPD representative asked the group whether leaking cables should be replaced as soon as possible with modern solid cable. (S)he added that modern cables remove the problem but are costly and difficult to install
- A local authority officer asked about the likelihood of a leak
- A WPD representative responded by stating that the likelihood of leaks varies hugely depending on whether the cable was installed carefully

Table 7

- A business representative stated that (s)he is intrigued that SF6 is worse than CO2. (S)he asked if there are there any measures or figures of how much is leaking
- A business representative stated that small leaks are not an '*environmental disaster*'
- A major user asked if drinking water could be affected by leaking pipes
- An energy group representative said WPD needs a '*sensible replacement policy*' where replacements are carried out before leaks occur
- A stakeholder commented that WPD has a responsibility to customers concerning low prices but they also have a '*responsibility to mankind to not destroy the environment*'
- A business representative stated that if WPD is not being proactive there will be problems with leaking cables
- An energy group representative said if WPD ensured the cables are laid correctly and are well managed they should last forever
- A business representative said WPD should '*adopt*' the policy to replace the cables before leaks occur

- A representative of a developer stated replacing cables before leaks occur is an *'impractical idea'*. The stakeholder suggested that WPD shouldn't replace cables until there is a leak as we don't know what the life span of cable will be

6.10. Issue 10. Continuing undergrounding schemes in National Parks / AONBs

Table 1

- Priority: High
- An AONB officer stated that *'the AONB National Association feels that this is a positive thing as National Parks are appealing because of what they look like; pylons spoil the view'*. There is, however, a general concern that if cables are underground, when repairs were needed natural habitats would be disturbed. This would completely change local habitats in some cases. Each scheme should be looked at in isolation to respect the local habitats. Some habitats can be disturbed, others can't
- An AONB officer stated that AONBs had £6million to manage this Issue. A business representative asked what percentage of WPDs income this was and stated that the company could *'triple this figure'*
- An energy group representative asked if roads through AONBs could be used for the undergrounding. (S)he asked about how logical it would be to move cables where they run over sensitive habitats
- A health care representative stated that habitats should be scoped out
- A business representative stated that (s)he was in favour of a very large budget for undergrounding and referred to problems in Wales
- A business representative stated that many people were concerned about WPD's investment in the local landscape rather than just AONBs. (S)he also put forward that there are beautiful landscapes outside of AONBs. (S)he believes that WPD should have a bigger budget from Ofgem for undergrounding
- A health care representative and an energy group representative agreed that Q11, 12 and 13 were one and the same - intrinsically interlinked
- An energy group member stated that cables are eight times more likely to break over ground than underground. So undergrounding represents a saving
- A local authority officer asked if pylons were the result of a design competition
- A business representative stated that there is an argument for making smaller pylons prettier as the double poles with the crossbar cause more hassle than the single pylons

Table 2

- Priority: Low
- A representative from an energy company considered Question 10 was a *'very good'* thing to do but wondered that, if WPD was going to do this in two years' time anyway and it was *'a question of priorities'*, then should WPD accelerate the schemes or wait; (s)he asked WPD how many of the potential projects it was considering were left to do compared with what had been done
- WPD confirmed that there were *'loads more left than done'*
- A representative from an energy company added that Question 10 was good as a *'visual piece'* but was of *'small operational benefit'*
- A major user and a representative from an environmental organisation highlighted that while Question 9 (minimising leaks) was about a *'negative effect'* on the environment, Question 10 had an *'aesthetic impact'*, so it was important to prioritise between the two
- An Officer of a local authority raised the issue that pylon routes were *'quite contentious'* but did not consider it to be a high priority for the industry due to cost implications
- A representative from an environmental organisation disagreed and stressed that high-speed lines would have a *'greater impact'*

Table 3

- Stakeholders felt that this should be a low priority
- An elected representative mentioned the recent news about pylons going up on the Cornish way. The stakeholder stated that *'we don't recognise telegraph poles on streets, therefore undergrounding isn't a priority as the public will get used to their appearance'*
- An energy group representative stated that new cabling could go underground in the future
- An energy group representative commented that prioritising is important when discussing underground cables whilst maintaining chemical filled cables. The stakeholder felt that priorities need to be considered
- An elected representative stated that Wind Turbines are an important issue in the South West. This stakeholder added that Wind Turbines in industrial sites are fine but why are they needed in rural areas where there is little usage
- An energy group representative stated that it is right to put wind farms where the wind is, even if it a picturesque site

Table 4

- Stakeholder felt that this should be a medium to low priority

- A business group representative felt that this was potentially a controversial issue. (S)he commented that although it is important, it is a less of a priority in comparison to the other issues
- An elected representative remarked that *'it is essential to protect what we have left'*
- A business group representative questioned whether the process of undergrounding is more damaging than just leaving the cables as they are
- An energy group representative asked whether these schemes were looking at cables across all AONB's. (S)he commented that users should be made be aware of the cost implications, and that further consumer engagement needs to happen
- The stakeholders were in agreement that undergrounding schemes are valuable, but they also felt that this was a low priority issue in relation to the others

Table 5

- Priority: Low
- An environmental group representative stated that the public does not have enough information about undergrounding and the long term costs
- A local authority planning officer agreed and added that the information that (s)he has received is about the cost now and not what the cost will be in 50 – 60 years time
- A representative of a developer wanted to know if this Issue was about implementing undergrounding at end of life replacement
- An environmental group representative stated that (s)he would like to have a more honest debate about the cost of undergrounding. The stakeholder felt that the public needs the full facts and impacts of undergrounding before they can make a decision. The stakeholder suggested that if undergrounding becomes less expensive than the norm then it will be beneficial
- A local authority planning officer stated that if overhead cables are already there then people already live with the visual harm. The stakeholder suggested that WPD does not need to be proactive in changing overhead cabling to underground cabling
- Group consensus was that this is not a priority

Table 6

- Stakeholders felt that this should be a medium to low priority
- A WPD representative highlighted that undergrounding was expensive, and asked the group whether they would want some of their £100 to go towards such schemes
- A business representative felt that undergrounding could lead to a lot of benefits such as being a more reliable source of power

- An energy group representative summed up the consensus by stating that *'it comes down to where you want to spend your money and the order of your priorities'*

Table 7

- Priority: Low
- A representative of a major user stated underground schemes in National Parks and AONBs are not a priority

6.11. Issue 11. Protecting habitats and species

Table 1

- Priority: High
- A business representative stated that this is *'business as usual'*

Table 2

- Priority: Medium
- A representative from an environmental company considered that this Question was *'absolutely'* a priority for WPD, therefore there was *'nothing to discuss'*; the other stakeholders agreed

Table 3

- Stakeholders felt that this should be a low priority
- A local authority officer stated that this is a statutory obligation under European Union regulations, so it is a priority

Table 4

- Stakeholders felt that this should be a medium priority
- The stakeholders agreed that, like the previous issue of undergrounding in AONB's, this is an important issue, but still a lower priority issue than others
- A business group representative stated that it is an important investment, but not at the cost of developing other technologies
- A local authority officer questioned whether this should fall under corporate responsibility
- An elected representative stated that it must be done in a feasible way, and cost effectiveness is key. (S)he remarked that *'wind turbines are apparently not an effective tool, so why sacrifice environments for them.'*

- A business group representative asked the WPD representative whether Ofgem monitors environmental issues
- The WPD representative replied that Ofgem monitor carbon and technologies more than other environmental issues

Table 5

- Stakeholders stated that this is a high priority but should be ranked below the other high categories
- There was a group consensus that *'protecting habitats and species'* is a priority

Table 6

- Stakeholders felt that this should be a medium to low priority
- An energy group representative stated that protecting habitats and species is time consuming. It was added that the installation of any major infrastructure always has an impact on local species and habitats
- A major user added *'bring the bulldozers in'*

Table 7

- Priority: Low
- A local authority officer stated that their council has *'the power in planning to protect habitats and species.'* (S)he stated it should be a key priority to protect habitats and species for WPD
- A local authority officer felt the protection of habitats and species should be *'high on the list when looking to create a sustainable future.'* (S)he added that WPD should also be looking at climate change
- An energy group representative stated that WPD's core business plans should be about what *'affects human beings'*. Looking after the *'amenities for wildlife and habitats'* is not as important
- An energy group representative said networks are currently planning to focus on *'wind farm proposals.'* The network needs to be *'seen to be doing something to appease others'*
- A local authority officer stated it all depends on where the cables will be laid underground, and the impact it will have on the wildlife. The stakeholder felt that this will then need to be looked at
- A representative of a developer stated that regulations to protect habitats should *'automatically be part of the planning system'*

- An energy group representative stated if there is a general consensus that wildlife is important, then electricity companies will have to invest more money and this could result in customer's bills increasing

6.12. Issue 12. Flood and climate change mitigation

Table 1

- Priority: High

Table 2

- Priority: High
- WPD explained what it was already doing about flood mitigation but asked stakeholders how much how further it should take this
- A representative from an environmental company asked WPD about the difference between overhead versus underground kilometre costs
- WPD replied and added there was also the issue and cost of disposing of the excavated material

Table 3

- Stakeholders were in agreement that this should be a high priority
- A local authority officer stated WPD shouldn't be building substations on flood plains
- A representative of a major user stated it is a considering where to build houses is an important national issue to consider, and one for the Government

Table 4

- Stakeholders felt that this should be a high (top three) priority

Table 5

- Priority: High (top three)
- A local authority planning officer felt that this Issue should be the highest priority

Table 6

- Stakeholders felt that this should be a medium priority
- There was minimal discussion around this priority but the general consensus was that flood and climate mitigation' is *fairly important*

Table 7

- For the planning officers this was seen as a high priority. The other stakeholders did not agree and felt it was a medium priority Issue

6.13. Additional comments

Table 1

- Following WPD's workshop, an AONB officer emailed written feedback to WPD. This feedback is below:
 - *"I would say that the South Wales Protected Landscapes (Brecon Beacons & Pembrokeshire Coast National Parks and Gower & Wye Valley AONBs) have found it very productive working with WPD over the past 3-4yrs, with a number of projects successfully completed/underway. The WPD staff have been very positive and helpful – it is WPD who undertake most of the work, with the Protected Areas staff doing little more than bringing forward projects, and providing local information and contacts."*

Table 2

- One additional Issue raised was collaboration with / between other agencies

Table 3

- There were no additional comments from stakeholders on table 3

Table 4

- A business group representative commented that it is *'important to make what you've already got function efficiently and well'*

Table 5

- One stakeholder raised the question of how far WPD should go in making the network ready for an increase in new connections
- An environmental group representative stated that there will be an increasing issue with water shortage. The stakeholder suggested that the movement of water in the wrong direction is going to have huge electricity demand, and that this should be part of WPD's long term thinking
- There was a group discussion about what WPD is doing to encourage the next generation of engineers

Table 6

- The group expressed concerns about the Government's ambitions to introduce smart meter technology in households across the country due to security and cost concerns
- The stakeholders agreed that WPD should consider collaborating with green energy service providers

Table 7

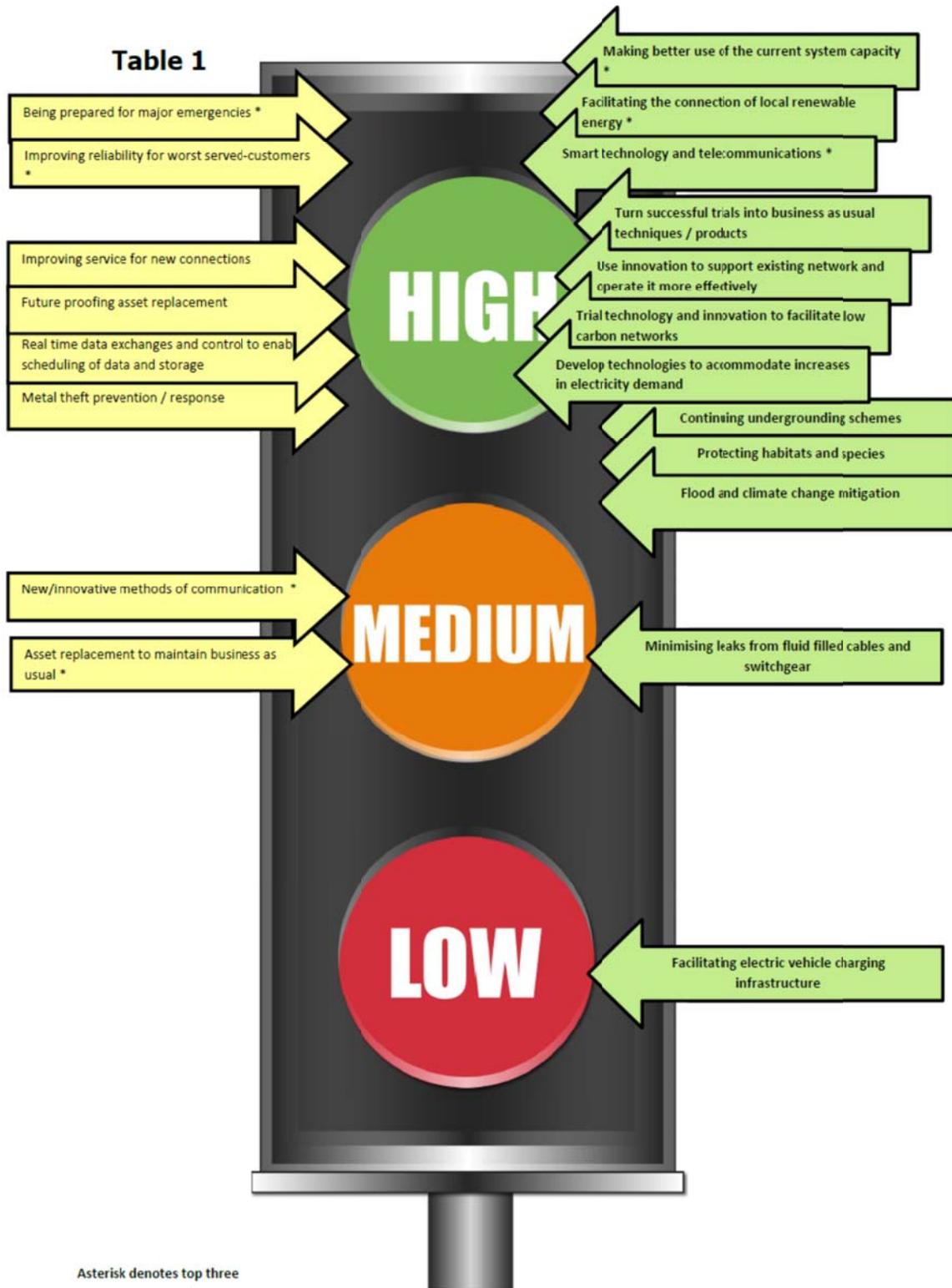
- A business representative said new smart technology is wanted/needed
- The stakeholders included an extra category of future proofing people through training
- The stakeholders felt that Issue 9 should be left unrated as the stakeholders felt they required more information on this point

7. Prioritisation and conclusions

7.1. Innovation and the Environment

Stakeholders were first asked if they considered that each of the Issues should be a priority for WPD.

Priority	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7
Use innovation to support existing network and operate it more effectively	Y	Y	N/A	N/A	Y	Y	Y
Develop technologies to accommodate increases in electricity demand	Y	Y	N/A	N/A	Y	Y	Y
Trial technology and innovation to facilitate low carbon networks	Y	Y	N/A	N/A	Y	Y	N
Turn successful trials into business as usual techniques / products	Y	Y	N/A	N/A	Y	Y	N
Making better use of the current system capacity	Y	Y	Y	Y	Y	Y	N
Smart technology and telecommunications	Y	Y	Y	Y	Y	Y	N
Facilitating the connection of local renewable energy	Y	Y	Y	Y	Y	Y	Y
Facilitating electric vehicle charging infrastructure	N	Y	N	Y/N	Y	N	N
Minimising leaks from fluid filled cables and gas filled switchgear	Y/N	Y	Y	Y	Y	N	N
Continuing undergrounding schemes in National Parks / AONBs	Y	Y	Y	Y	N	N	N
Protecting habitats and species	Y	Y	Y	Y	Y	N	Y
Flood and climate change mitigation	Y	Y	Y	Y	Y	N	Y
Collaboration with other agencies	N/A	Y	N/A	N/A	N/A	N/A	N/A
Education regarding training and technology	N/A	N/A	N/A	N/A	Y	N/A	N/A
Future proofing human resources - training	N/A	N/A	N/A	N/A	N/A	N/A	Y



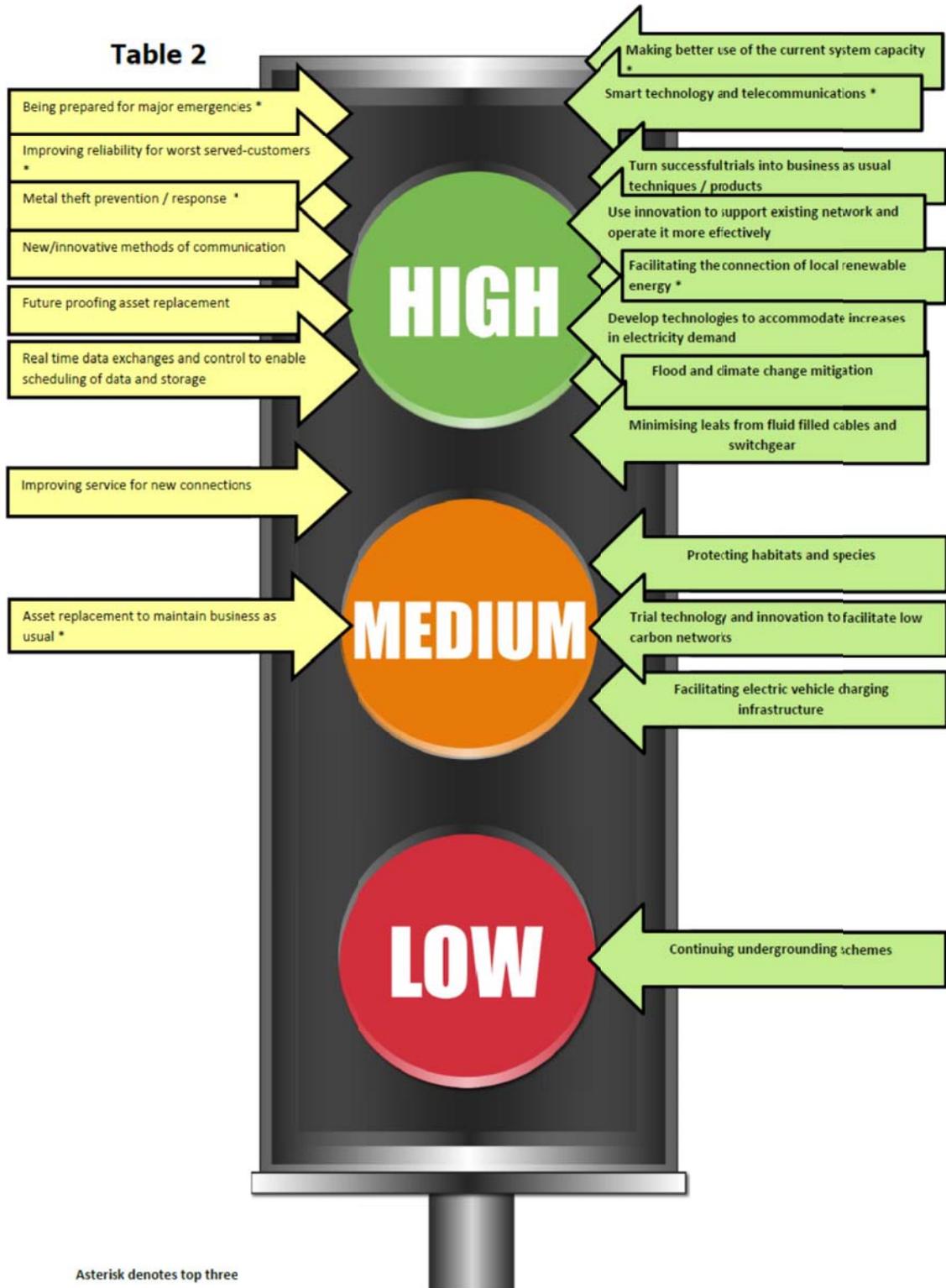
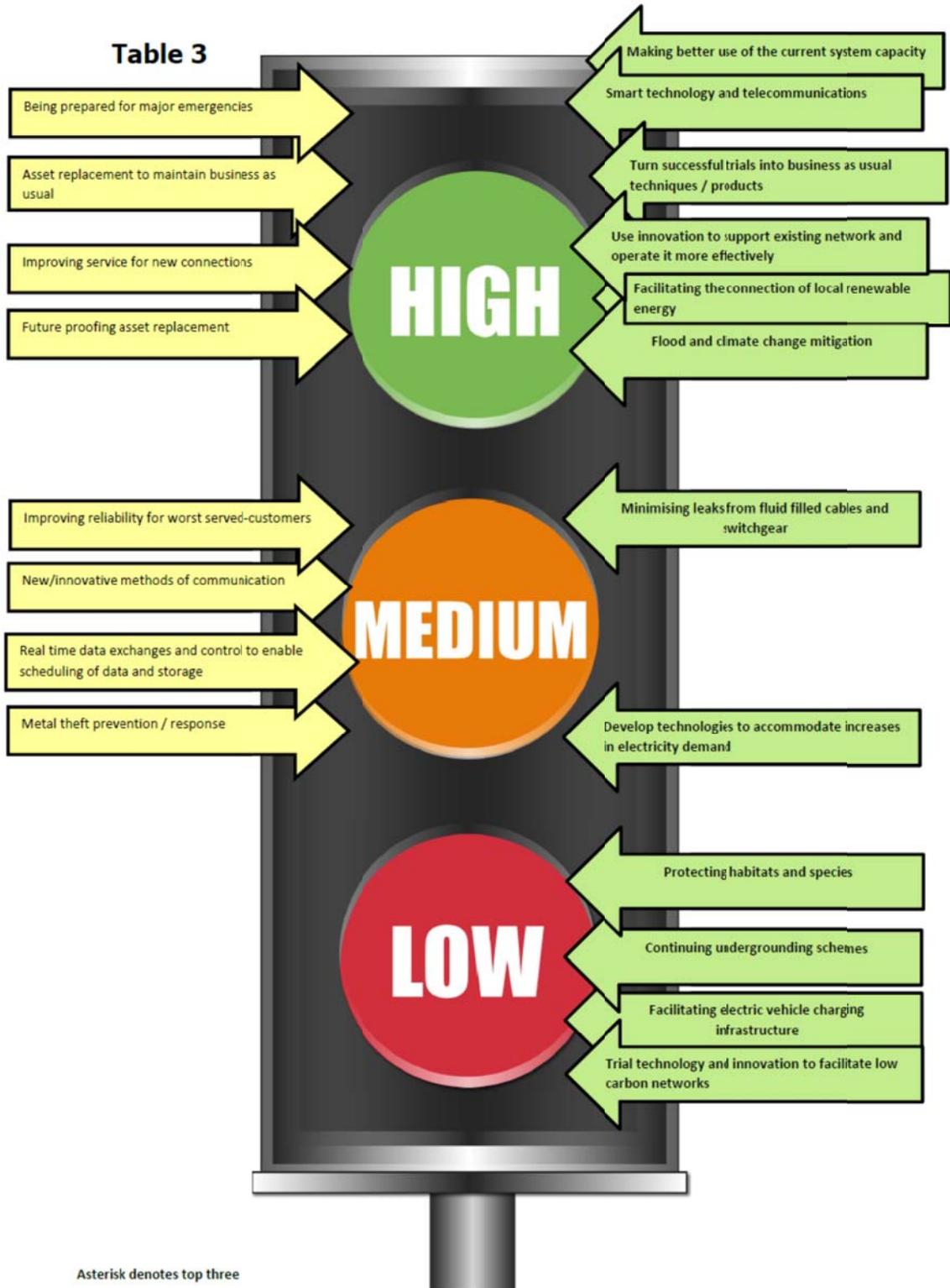


Table 3



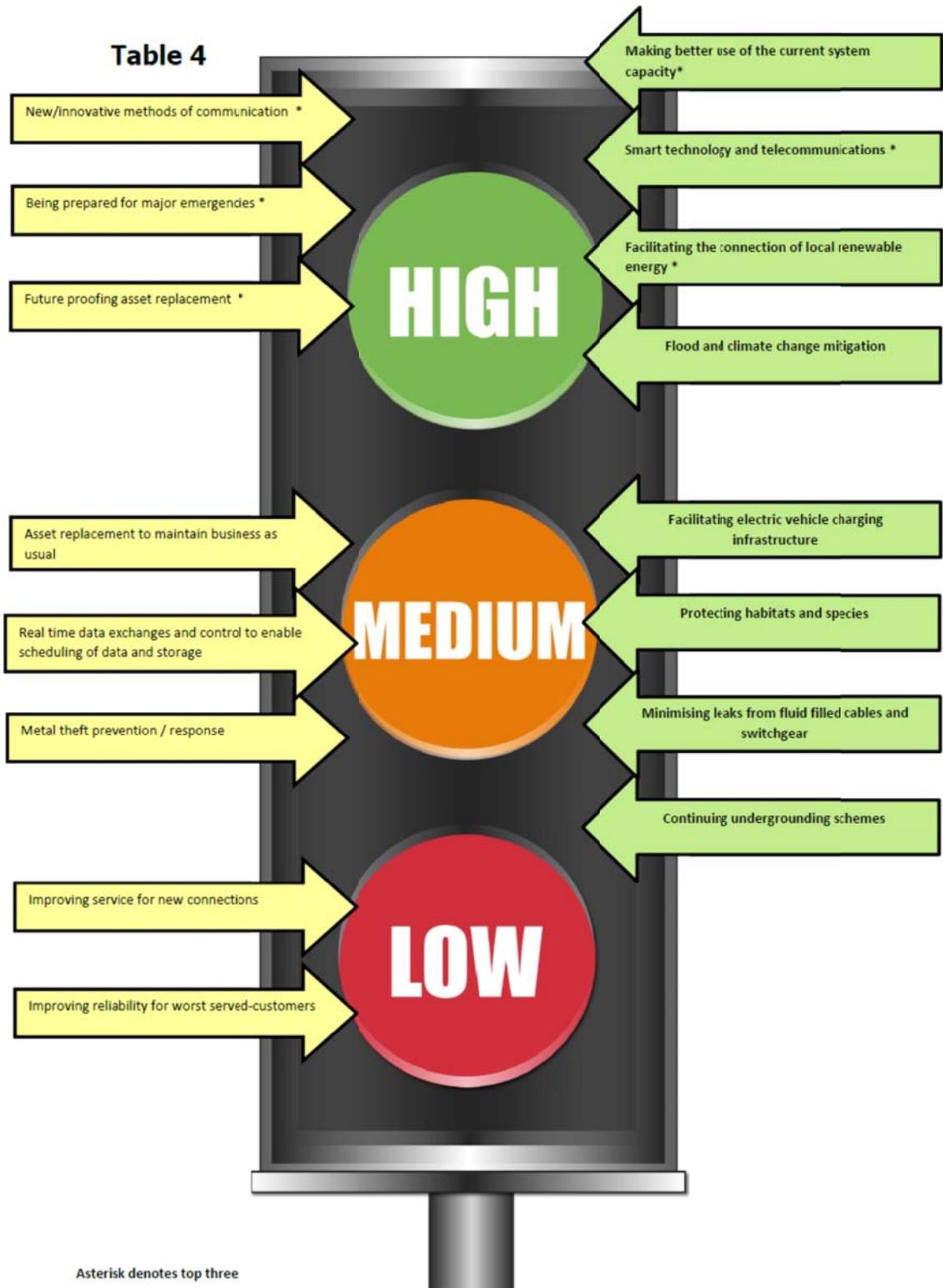
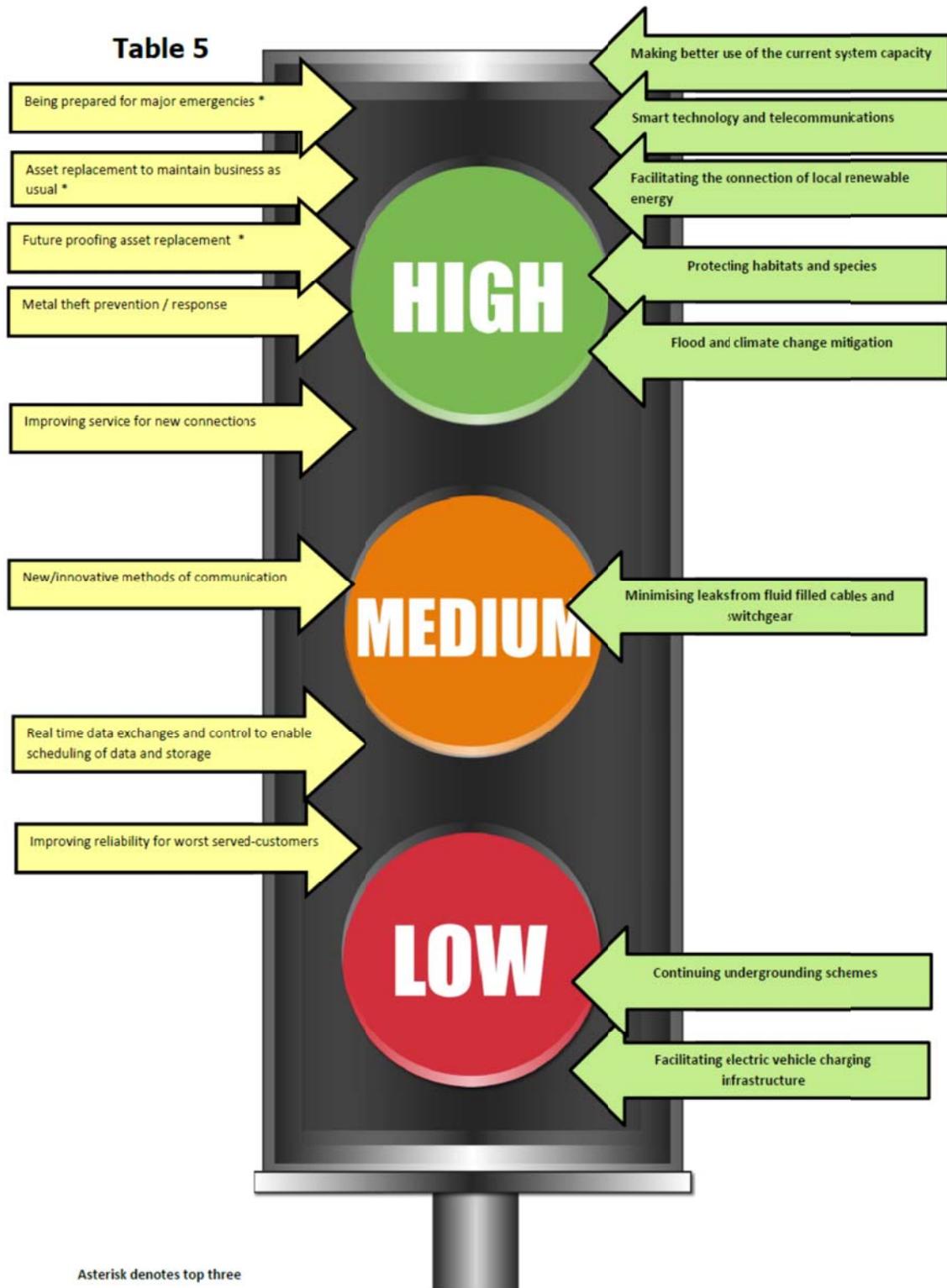


Table 5



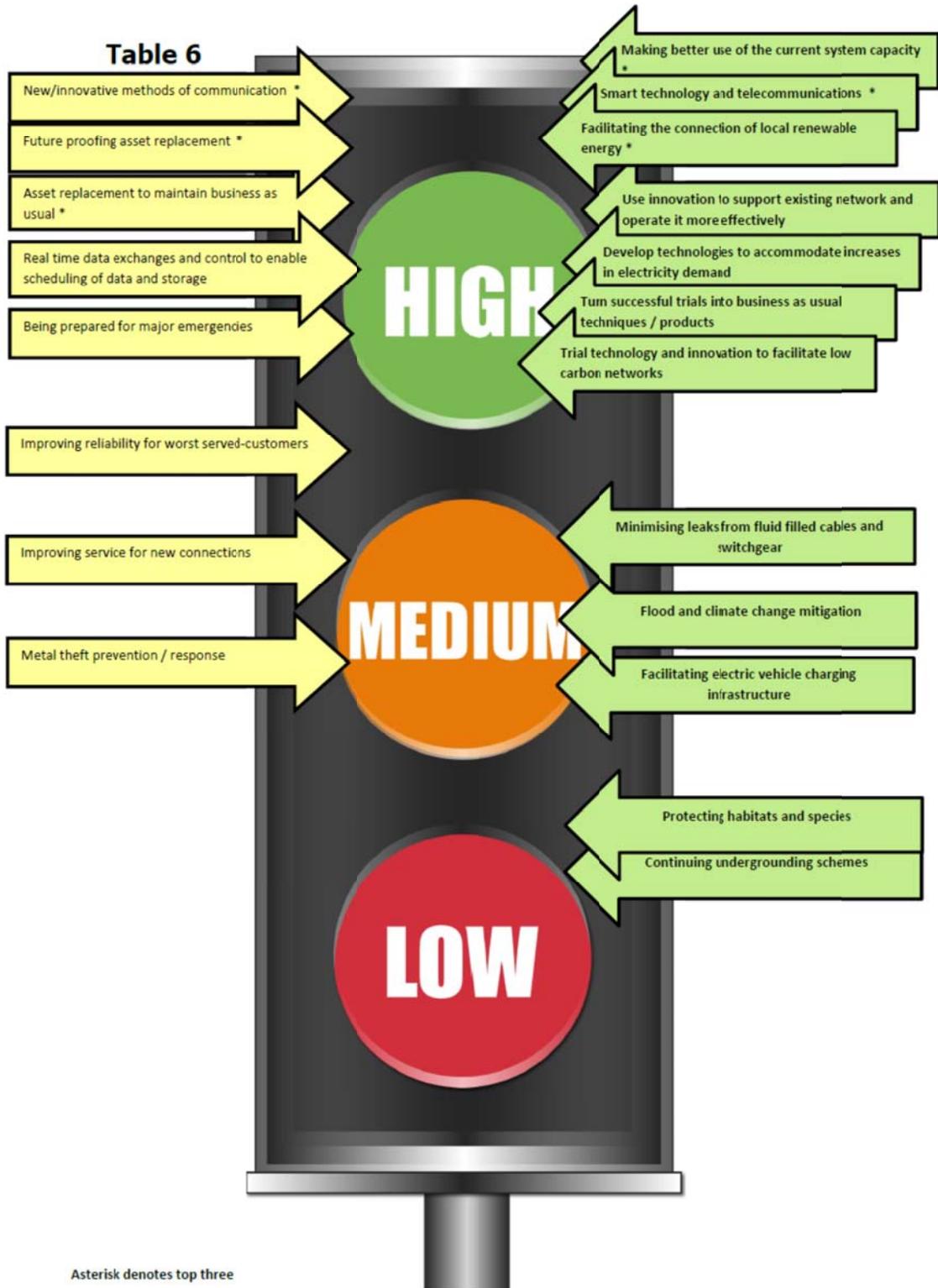
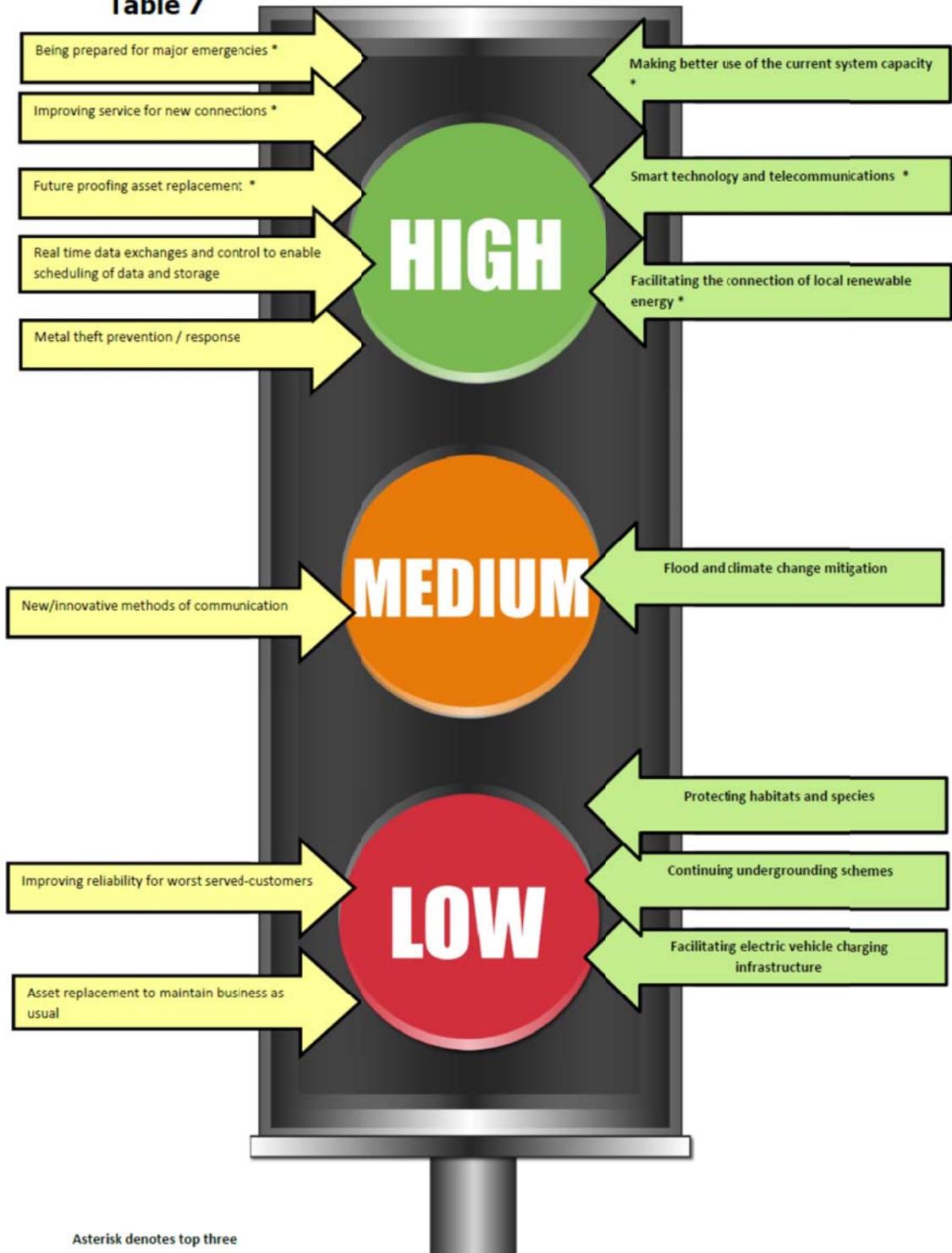


Table 7



7.2. Overall conclusions

- 50 stakeholders attended the workshop in Birmingham, 46 of whom submitted feedback. 19 of these people said they found the workshop to be 'very useful' and 27 found it to be 'useful'. This is very encouraging
- When stakeholders were initially asked which Issues relating to Customer Service and Networks of the Future should be a priority, the vast majority of stakeholders agreed with all of them
- Across the group as a whole, the Issue of 'new/innovative methods of communication' was seen as a medium to high priority. For two of the seven tables, this Issue was, however, a top three priority. Some stakeholders were of the view that WPD should consider smartphone 'apps' as a way of introducing new methods of communication. The point was, however, made that elderly customers would always be reliant on the telephone so WPD should not lose sight of this
- Stakeholders viewed 'improving the service for new connections' as being a medium to high priority. Suggested ways in which WPD could improve its service included having a single point of contact for new connections and more up front information on costs
- Being prepared for major emergencies was viewed as being the highest priority Issue for WPD across the group. For five out of seven tables, this was seen as being a top three priority Issue. A number of examples of what constitutes a major emergency were given and this was an Issue that many stakeholders felt strongly about. The fact that the workshop took place in Birmingham (Britain's 'second city') may account for this
- There was no consensus across the group with regard to 'improving reliability for worst served-customers'. Some people, including those who lived in rural areas, said that these customers should not expect the same levels of reliability as urban customers. However, the point was made that all customers are paying the same for the service. It was also felt by some that special consideration ought to be given to elderly and vulnerable 'worst served' customers
- Across the group, 'asset replacement to maintain business as usual' was seen as being a medium priority Issue. A number of stakeholders made the point that this should be the least they should expect from their electricity distributor. Others considered this Issue alongside future proofing asset replacement. Many felt that simply replacing assets 'like for like' was not the appropriate strategy and that WPD should look to upgrade its assets where possible
- Future proofing asset replacement was considered the most important Networks priority for WPD across the group, and was deemed a top three priority for six of the seven tables. While there was overall support for this Issue, it was nevertheless the case that a number of stakeholders recommended a prudent approach to this as technology moves so quickly
- There was a certain amount of support for the Issue of 'real time data exchanges and control to enable scheduling of data and storage', with three stakeholder

groups ranking it as a high priority Issue. The point was made that this information may be of more use to WPD than its customers but most stakeholders could see the value of more information. It was felt by a number of groups that this Issue was part of future proofing and, as a result, these topics were often discussed together

- Most stakeholders viewed metal theft prevention / response as being an important priority and there was a good deal of anecdotal evidence at the workshop of this being a big problem in the area. Some stakeholders were of the view that this issue would not be such a big problem in the future but there was general support for WPD putting pressure on the Government to deal with this in the short-term
- In terms of additional priority Issues, most groups stated that they would like to see reducing power cuts included on the list
- There was a good deal of support for more open and transparent channels of communication being given greater emphasis. A number of local authority representatives said they would like WPD to work more closely with planning departments in order to ensure that plans are in place for new housing developments
- Stakeholders on one table felt that there should be more competition as this would ensure that DNOs are more customer focussed
- There was a good deal of support for the Issue of using innovation to support the existing network and operate it more effectively. Four of the tables rated this as a high priority Issue and the other three tables discussed this along with 'develop technologies to accommodate increases in electricity demand; 'trial technology and innovation to facilitate low carbon networks' and 'turn successful trials into business as usual techniques / products'
- It was flagged up by a number of stakeholders that experts in specialised areas are getting older and there are not enough trained or experienced younger people to take over. This was seen by some as a serious problem facing companies like WPD and the point was made that investing in the future should involve investment in training
- There was general support among stakeholders for the concept of introducing new technology in an incremental way. Many were of the view that it was difficult to see into the future and that WPD should be mindful of this when upgrading its assets
- The Issue of 'making better use of the current system capacity (e.g. substation monitoring and dynamic asset rating)' was seen as a top three priority by six of the seven tables, making it one of the most important Innovation priorities according to stakeholders. This subject did not engender a great deal of discussion with most stakeholders viewing it as being imperative
- There was a good deal of support for the Issue of 'smart technology and telecommunications (new installation of network that allows remote data monitoring and operation of assets)' with most stakeholder groups ranking this as a top three priority. It was felt that real time information would allow WPD to make

better use of the network, respond to emergencies and gain a better insight into customer usage

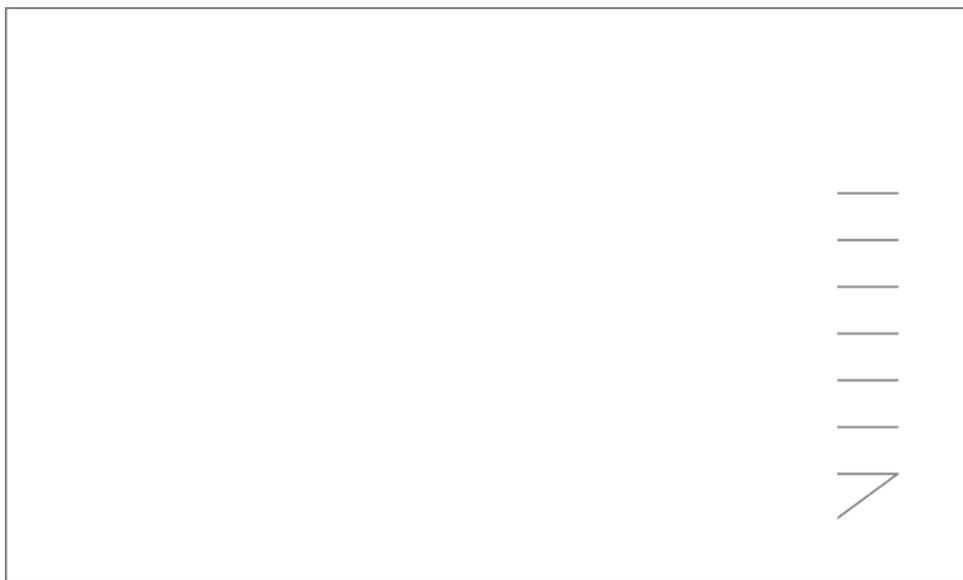
- Stakeholders were generally very much in favour of 'facilitating the connection of local renewable energy'. It was pointed out that Government policy was dictating this and that WPD would therefore have no choice but to help facilitate this. Some stakeholders cited problems that may arise from this, however, and it was felt that more research needed to be done in order to make this transition to locally generated power as smooth as possible
- There was not a good deal of support for WPD facilitating electric vehicle charging infrastructure. This was generally seen as being a medium to low priority. The point was made by a number of stakeholder groups that the Government and manufacturers should pave the way for electric vehicles and that WPD should be reactive rather than proactive with regard to this Issue
- Although stakeholders could see the importance of 'minimising leaks from fluid filled cables and gas filled switchgear, this was seen by most as a medium to low priority Issue. Many were of the view that because leakage instances were infrequent, the approach should be to identify potential risks rather than replace all assets
- For some stakeholders, the Issue of 'undergrounding in AONBs' was an important priority but this view was not shared by the group as a whole. It was broadly seen as being a medium or low priority when placed into context with all of the other Issues being discussed. Most felt that this was a nice thing to do but that cost of this was prohibitive
- There were similar sentiments expressed about the Issue of protecting habitats and species. While it was a high priority for some, the group as a whole did not agree. Most felt that WPD should adhere to Government and EU requirements but should not invest to do more than this
- Of all the Environment Issues discussed, there was the most support for 'flood and climate change mitigation'. Five of the seven tables ranked this as a high priority and for some (notably planning officers) this was the most important Issue discussed
- The Issue of partnership working was raised by a number of stakeholders. It was deemed to be very important that WPD works with the relevant bodies, particularly in order to help facilitate new connections

8. Stakeholder feedback

Stakeholders were asked to fill out a comment form following the Birmingham workshop. The comments we received are shown below:

8.1. Q1. Did you find the workshops useful?

None of the attendees were of the view that the workshop was *'not useful'* and 19 of the 46 comment forms received stated it was *'very useful.'*



8.2. Q2. Was the venue conveniently located for you?

The venue was conveniently located for 96% of attendees. One attendee stated the reason why it was not convenient was to due their personal circumstances.

8.3. Did we provide enough information at the workshop

94% of stakeholders who attended stated that WPD provided enough information.

8.4. Do you want to be kept informed of WPD's plans in the future?

All of the stakeholders who attended want to be kept informed of WPD's future plans.

8.5. Do you have any other comments on the workshop or the venue?

Twenty eight stakeholders had additional comments.

A selection of the comments is shown below:

- *'It's good to know that you are interested in the views of others.'*
- *'Very interesting discussion. Quite difficult to comment on respective priorities due to the amount of knowledge on the commercial implications.'*
- *'Very stimulating and very topical.'*
- *'Questions need to be more specific or other supporting information otherwise they lead to too many other factors.'*
- *'Acoustics were not great in room. Workshop was well run and facilitated.'*
- *'Found workshop very useful in being asked what we want.'*