

**WESTERN POWER**   
**DISTRIBUTION**

*Serving the Midlands, South West and Wales*

CiC Group meeting 3<sup>rd</sup> April 2019

Simon Pett

Network Services Manager

East Midlands

# Agenda

- Welcome & housekeeping
- Introductions
- High level updates since November CiC event at Gloucester
- Engineering Policy – Paul Jewell
- 11:15 - Coffee
- Connections Policy – Vanessa Buxton
- 12:45 – Review – Simon Pett/All
- 13:00 – Lunch

# High level update of existing and new actions related to CiC activity since November

# High level CiC updates

---

- Investigate the information provided on hot/cold sites at connection offer stage.
- Investigate improvements to the published area contact information.

# High level CiC updates

**WESTERN POWER DISTRIBUTION**

**Key**  
 Distribution Area Boundaries  
 Field Team Boundaries  
 Accuracy of Boundaries and Teams is not guaranteed.

© 1998 Western Power Distribution

**NORTH DEVON**

<b>1332</b>	<ul style="list-style-type: none"> <li>Truetton Moorhead and Redwood</li> <li>Truetton Moorhead</li> <li>Truetton Moorhead</li> <li>Truetton Moorhead</li> <li>Truetton Moorhead</li> </ul>
<b>1334</b>	<ul style="list-style-type: none"> <li>North Devon and Torridge</li> <li>North Devon</li> <li>North Devon</li> <li>North Devon</li> <li>North Devon</li> </ul>
<b>1335</b>	<ul style="list-style-type: none"> <li>North Devon and Torridge</li> <li>North Devon</li> <li>North Devon</li> <li>North Devon</li> <li>North Devon</li> </ul>
<b>1337</b>	<ul style="list-style-type: none"> <li>North Devon</li> <li>North Devon</li> <li>North Devon</li> <li>North Devon</li> <li>North Devon</li> </ul>

**NORTH SOMERSET**

<b>1188</b>	<ul style="list-style-type: none"> <li>North Somerset</li> <li>North Somerset</li> <li>North Somerset</li> <li>North Somerset</li> <li>North Somerset</li> </ul>
<b>1189</b>	<ul style="list-style-type: none"> <li>North Somerset</li> <li>North Somerset</li> <li>North Somerset</li> <li>North Somerset</li> <li>North Somerset</li> </ul>
<b>1184</b>	<ul style="list-style-type: none"> <li>North Somerset</li> <li>North Somerset</li> <li>North Somerset</li> <li>North Somerset</li> <li>North Somerset</li> </ul>

**SOMERSET**  
 Distribution Manager: Chris Gennaway

**SOUTH SOMERSET**

<b>1182</b>	<ul style="list-style-type: none"> <li>South Somerset</li> <li>South Somerset</li> <li>South Somerset</li> <li>South Somerset</li> <li>South Somerset</li> </ul>
<b>1183</b>	<ul style="list-style-type: none"> <li>South Somerset</li> <li>South Somerset</li> <li>South Somerset</li> <li>South Somerset</li> <li>South Somerset</li> </ul>
<b>1185</b>	<ul style="list-style-type: none"> <li>South Somerset</li> <li>South Somerset</li> <li>South Somerset</li> <li>South Somerset</li> <li>South Somerset</li> </ul>

**BRISTOL**

<b>1176</b>	<ul style="list-style-type: none"> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> </ul>
<b>1177</b>	<ul style="list-style-type: none"> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> </ul>
<b>1178</b>	<ul style="list-style-type: none"> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> </ul>
<b>1179</b>	<ul style="list-style-type: none"> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> </ul>
<b>1171</b>	<ul style="list-style-type: none"> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> <li>Bristol</li> </ul>

**DOODNICH** DOODNICH Distribution Manager: Mike Rogers

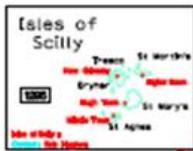
<b>1287</b>	<ul style="list-style-type: none"> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> </ul>	<b>1282</b>	<ul style="list-style-type: none"> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> </ul>
<b>1288</b>	<ul style="list-style-type: none"> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> </ul>	<b>1284</b>	<ul style="list-style-type: none"> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> <li>Doodnich</li> </ul>

**REDRUTH** WEST CORNWALL Distribution Manager: Ian Newell

<b>1286</b>	<ul style="list-style-type: none"> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> </ul>	<b>1292</b>	<ul style="list-style-type: none"> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> </ul>
<b>1289</b>	<ul style="list-style-type: none"> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> </ul>	<b>1294</b>	<ul style="list-style-type: none"> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> <li>Redruth</li> </ul>

**PROJECITS SOUTH WEST** Distribution Manager: Richard Hordington

<b>1340</b>	<ul style="list-style-type: none"> <li>Projecits</li> <li>Projecits</li> <li>Projecits</li> <li>Projecits</li> <li>Projecits</li> </ul>	<b>1342</b>	<ul style="list-style-type: none"> <li>Projecits</li> <li>Projecits</li> <li>Projecits</li> <li>Projecits</li> <li>Projecits</li> </ul>
<b>1341</b>	<ul style="list-style-type: none"> <li>Projecits</li> <li>Projecits</li> <li>Projecits</li> <li>Projecits</li> <li>Projecits</li> </ul>		



**PLYMOUTH** PLYMOUTH Distribution Manager: Matt O'Dowd

<b>1272</b>	<ul style="list-style-type: none"> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> </ul>	<b>1277</b>	<ul style="list-style-type: none"> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> </ul>
<b>1273</b>	<ul style="list-style-type: none"> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> </ul>	<b>1279</b>	<ul style="list-style-type: none"> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> <li>Plymouth</li> </ul>

**TORBAY**

<b>1311</b>	<ul style="list-style-type: none"> <li>Torbay</li> <li>Torbay</li> <li>Torbay</li> <li>Torbay</li> <li>Torbay</li> </ul>
<b>1314</b>	<ul style="list-style-type: none"> <li>Torbay</li> <li>Torbay</li> <li>Torbay</li> <li>Torbay</li> <li>Torbay</li> </ul>

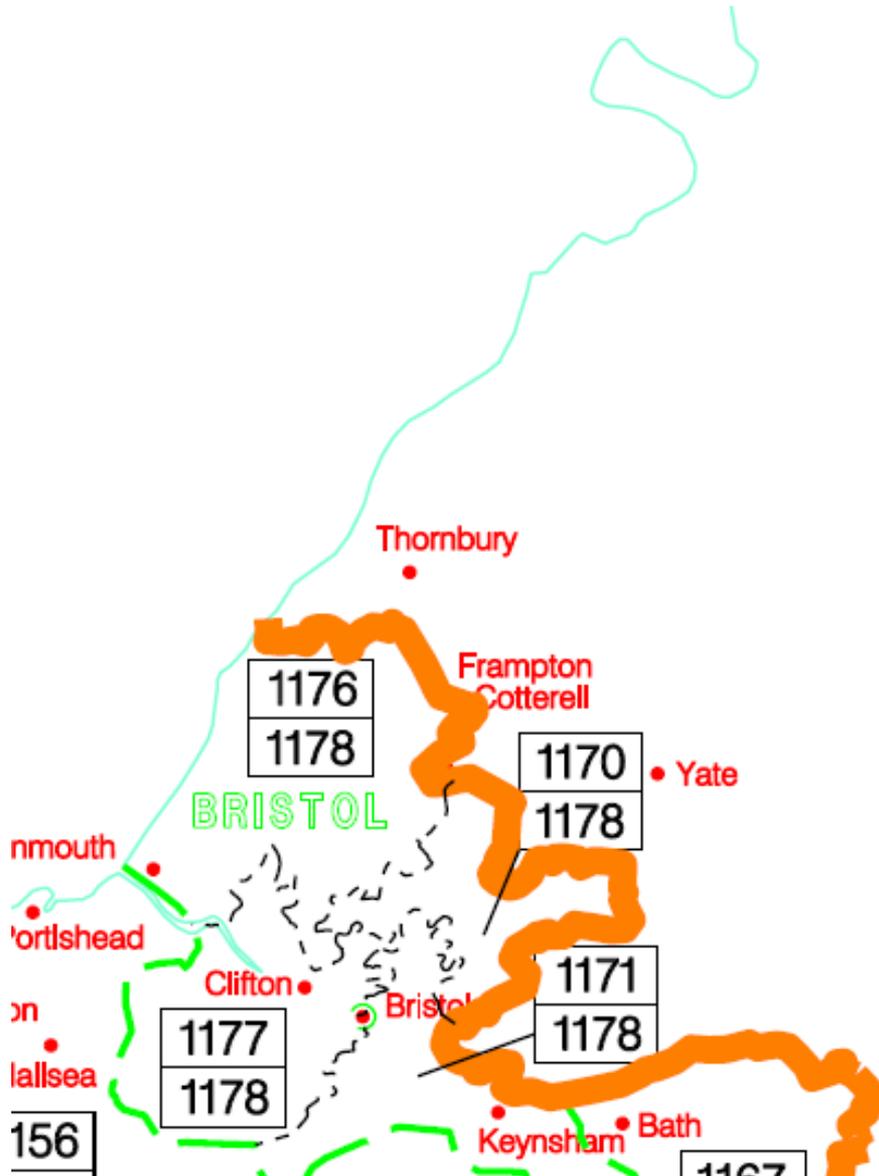
**MID AND EAST DEVON**

<b>1310</b>	<ul style="list-style-type: none"> <li>Mid and East Devon</li> </ul>
<b>1322</b>	<ul style="list-style-type: none"> <li>Mid and East Devon</li> </ul>
<b>1326</b>	<ul style="list-style-type: none"> <li>Mid and East Devon</li> </ul>
<b>1328</b>	<ul style="list-style-type: none"> <li>Mid and East Devon</li> </ul>

Contact Us :  
 Power Cut Information 0800 6783 105 Or 105  
 General Enquiries 0800 096 3080  
 Connection Enquiries 0800 096 3080

**DEVON**  
 Distribution Manager: Paul Bean

# High level CiC ICE updates



**BRISTOL**  
Distribution Manager : Christian Hjelm

## BRISTOL

### 1176

Team : North West Construction And Faults  
Team Manager : Mike Haskins  
Team Support : Kelle Ponsford  
Team Support : All Parry  
Team Planner : Robln Gould

### 1177

Team : South West Construction And Faults  
Team Manager : Andy Lingard  
Team Support : Sue Bolt  
Team Support : Debble Mower  
Team Planner : Lorna Purnell

### 1178

Team : Maintenance  
Team Manager : Neil Rawcliffe  
Team Support : Ange Thompson

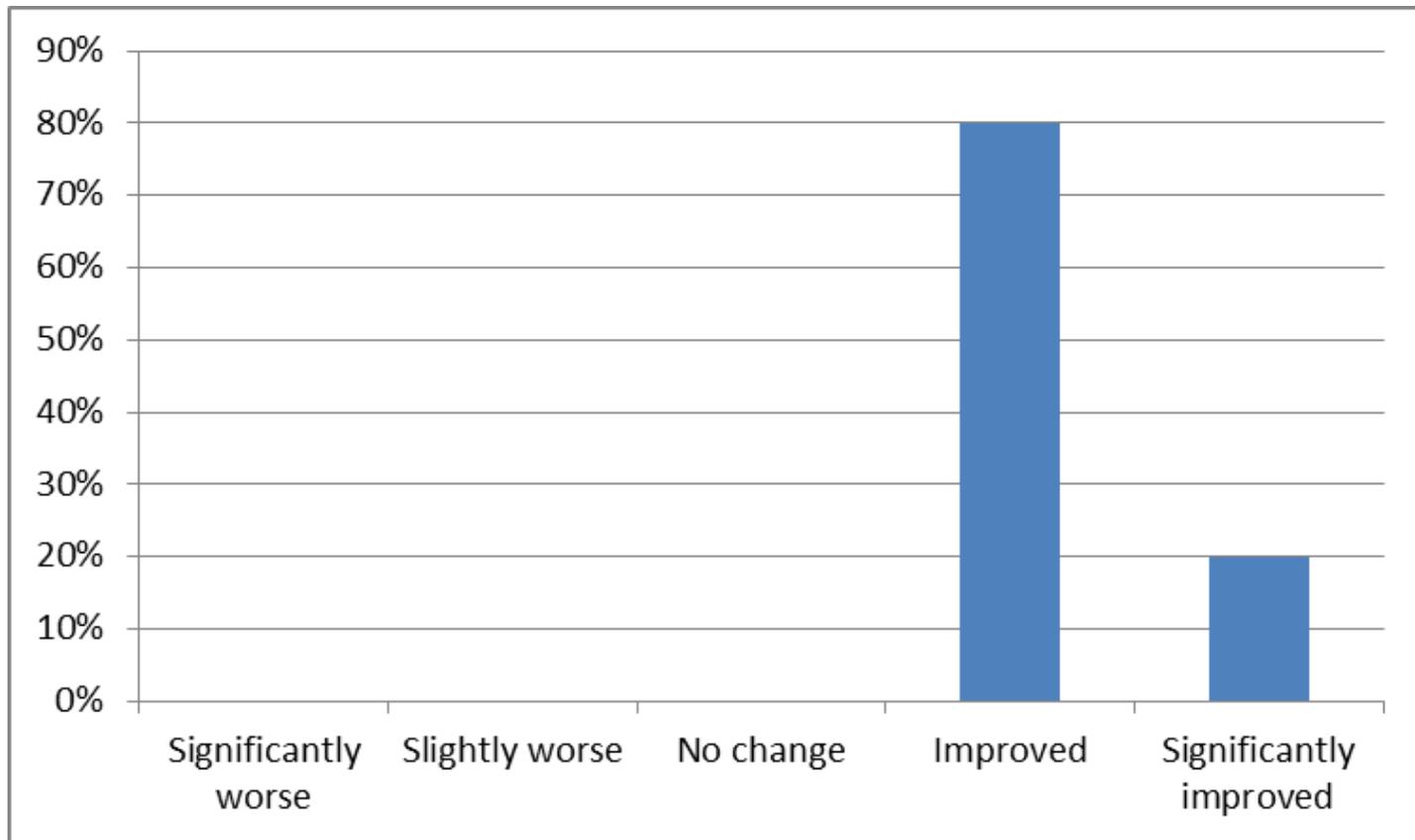
### 1170

Team : North East Construction And Faults  
Team Manager : Dave Simons  
Team Support : Richard Mower  
Team Planner : Slan Jones

- Link to the WPD allowable changes guidance document to be published.
- Investigate self completion of agreements.
- Contact ICP and IDNO representatives to obtain feedback on the CiCG with a view to reviewing its availability or frequency.

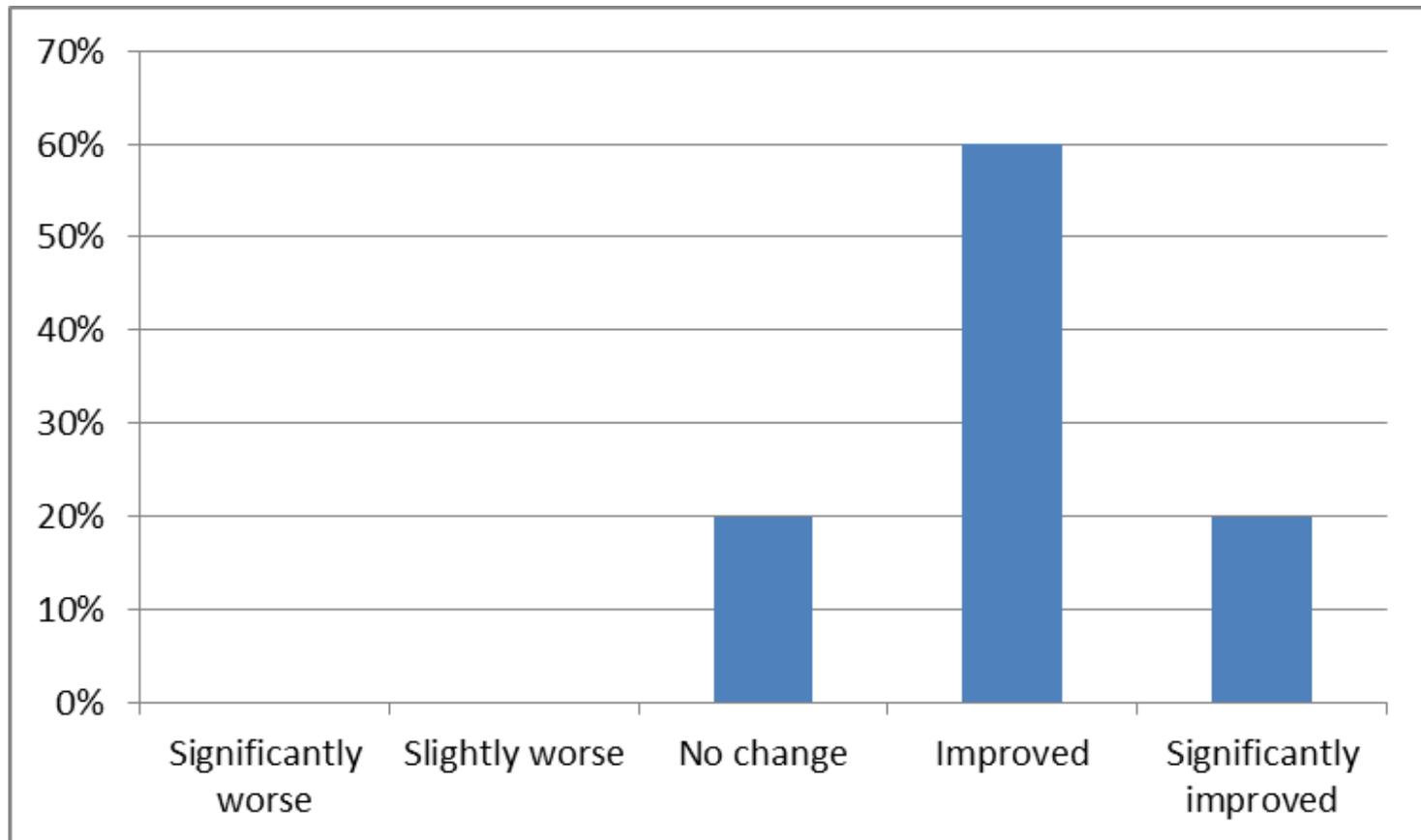
# High level CiC updates

- Based on your own experience, how would you assess the change in interaction between WPD and ICP/IDNO operators since 2017?



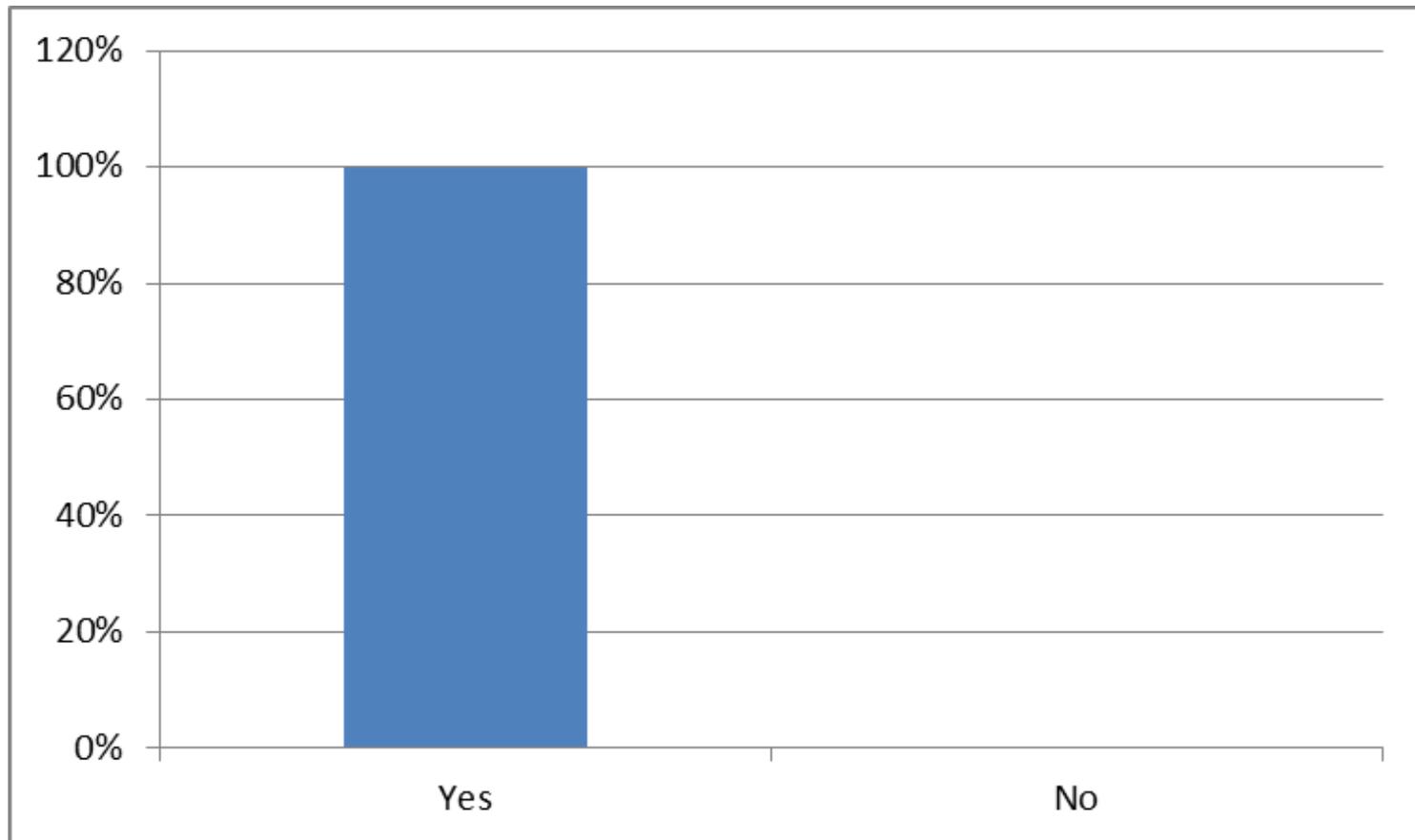
# High level CiC updates

- Using the link to the web site how would you assess the transparency of information and performance information between WPD and ICP/IDNOs since 2017?



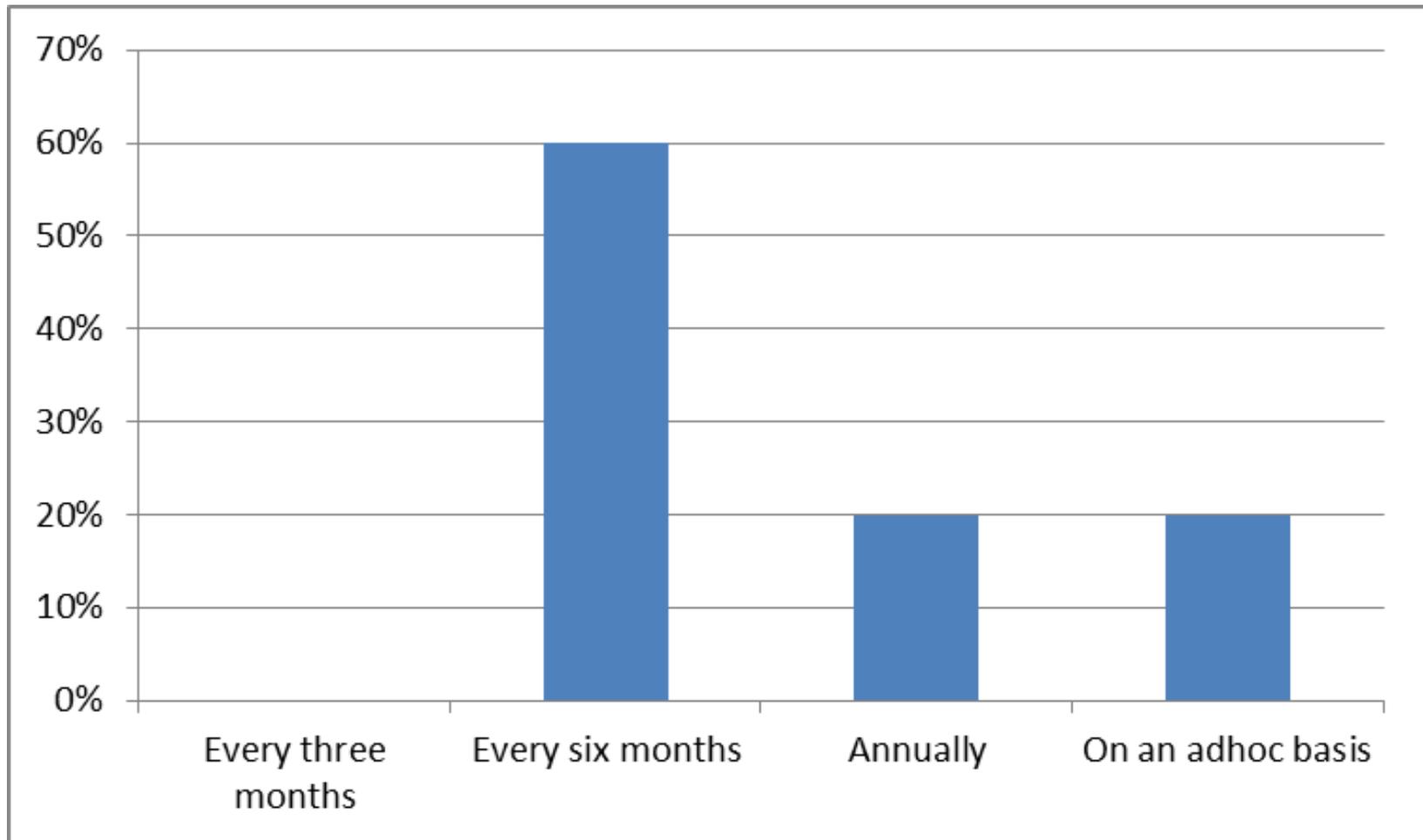
# High level CiC updates

- Do you think having a direct WPD senior point of contact to discuss issues is more helpful than a formalised multi-stakeholder working group?



# High level CiC updates

- The CiC group meets three times a year. In the future how often should the group meet?



## Areas to work on:

- Earthing, Changes to G81 that affect ICP/IDNO, Parity between work carried out by ICP and WPD.
- Obtaining network information when HV connections are going to be HOT. Need to standardise a process for WPD to provide this information.
- Updates and thoughts on WPD transition into a DSO.
- Self assessment of points of connection and developing a self serve model across all aspects of the connection process.

- March – Updated ST:OC1L1 to enable a WPD Control Engineer to issue switching instructions to an ICP member of staff who is training to become a SAP. The trainee ICP SAP will be under the Personal Supervision of the ICP's own fully authorised SAP at all times.
- Developing ST: NC2L/9 – Relating to Independent Connection Provider (ICP) High and Low Voltage Connections under ICP or WPD DSRs to allow a trial of LV disconnections



*Serving the Midlands, South West and Wales*

# Electric Vehicle Strategy

Paul Jewell  
DSO Development Manager

# Agenda

- Forecasts and the changing horizon
- WPD's Electric Vehicle Strategy document
- Stakeholder Engagement
- Changes to policy implemented over the past year
- Innovation Projects
- Targeted Commitments in 2019 and 2020

# Forecasts and the changing horizon

- Our forecasts for Electric Vehicle adoption predict around 37,000 across our region now rising to 3,064,000 in 2030.
- In simple terms, each Electric Vehicle uses the same kWhs of energy per year as a standard domestic home.
- The What Car “Car of the Year” for 2019 being the Kia e-Niro and it being described as “sensibly priced” and will “fit into most people’s lives”.
- We also predict price parity in 2021 or 2022 and a step change in car ownership.

# Electric Vehicle Strategy Document

- Our first Electric Vehicle strategy document was issued in March 2019. It covers areas including;
  - Our forecasts and assumptions
  - Technical considerations
  - Stakeholder Engagement
  - Our plans to support connections
  - Innovation Projects
  - Transitioning to Business as Usual
- Throughout 2019 we will create shorter customer-specific documents for the different stakeholders involved with Electric Vehicles.

# Making use of existing capacity

- We predict that many of our local transformers would support one 35kWh charge every five days for each connected customer
- 35kWh equates to around 150 miles range in many EVs
- The DoT National Transport Survey 2017 sets average annual mileage for all cars at 7,800 miles (and dropping).
- We will continue to identify heavily loaded assets and hotspots, and uprate them through the normal reinforcement process.
- We will publish a heat map showing our ability to support charging at a local transformer level

# Engagement with Local Authorities

- During 2018 we saw an increase in interest from Local Authorities who were planning to support Electric Vehicle deployment. Government grants have become available to help them with infrastructure.
- We held two Local Authority stakeholder Electric Vehicle events (Bristol & Birmingham) in November with 130 participants.
- Since the Electric Vehicle event we have revised our guidance to LAs based on their feedback and comments.
- We are planning innovation projects which will help LAs deliver charge points in an efficient way

# Engagement with Government

- We are working with OLEV and have engaged with them following the EU changes to the Building Performance Regulations. We want to ensure that changes to the regulations accommodate all future LCTs
- Our “Superfast Electricity” projects have been developed with Welsh Government support
- We engage on the Electric Vehicle Energy Taskforce with Innovate UK and Catapult Energy Systems
- We are working with BIES and BSO on Smart Device Standards

# Engagement with Housing and Fuel Retailers

- The Renewable Energy Association have featured our plans to increase house service cable designs and are lobbying government and local authority planning
- We have developed our plans for fuel stations based on advice from the Petrol Retailers Association
- We have also engaged with Shell UK, an existing supplier of electrical oil to WPD

# Accommodating EV demands

- At a domestic level we will use Electric Nation results and plan to install three phase services as a minimum standard
- On our low voltage network we expect to connect streetside chargers and also offer single high capacity charger connections at fuel stations.
- Using bespoke transformers we will connect Hub charging for car parks, and also connect multiple high capacity chargers. We will also connect some depot charging installations
- Using HV connections we will connect larger charger installations and high capacity depot chargers, such as bus depots

# Changes to Policy

- Technical considerations affect how Electric Vehicle chargers can be accommodated on our network. They include:
  - Harmonic effects (all locations)
  - Earthing (public locations)
- We have tested the harmonic effects of chargers through our “Electric Vehicle Emissions Testing” project. As a result we have changed policy to discount the harmonic effect of 7kW or 32A domestic chargers making their connection quicker and simpler.
- We have recalculated the segregation with specific modelling for Electric Vehicle chargers and reduced the segregation to 0.3m (3 phase) or 3.6m (single phase). Our design policy reflects this distance.

# Innovation Projects

- Back in 2009 we participated in the CABLED project, an early demonstrator of Electric Vehicle technology.
- We started the Electric Boulevards project in 2013, charging buses through Inductive Power Transfer.
- In 2016 we developed Electric Nation to understand how Electric Vehicle charging will affect our low voltage network and how this can be modelled and mitigated on our network.
- In 2019 we are progressing our Superfast Electricity project which will show how future domestic electricity installations may change.

# Future Innovation Projects

- We are planning projects to cover a wide range of Electric Vehicle charge installations and use models
- Electric Vehicle filling stations will look at options to provide capacity at concentrated charging locations
- On street charging will work with local authorities to provide solutions on existing streets. This may include the provision of a dedicated EV charging mains cable in the street and triggers for reinforcement
- Smart Homes (Electric Vehicle and storage) will use data from homes in the Superfast Electricity trial and establish how overall grid use could be reduced by the combined effect of LCTs

# Future Innovation Projects

- Connect and Manage will take the development of an LCT load controller into BAU. It will provide an interim solution to allow EV charging whilst upgrades are completed on constrained networks.
- Self Assessment is being delivered across the UK via the Energy Networks Association. It will help DNOs get pertinent service information from customers quickly and help speed up assessment
- Hub Charging will develop a transformer solution that can be deployed in areas where multiple chargers are planned, such as car parks.

# Targeted Commitments in 2019 and 2020

- Coming out of the innovation projects we expect to see a range of changes to our design standards.
- During 2019 we expect to;
  - Change the design minimum for service cables
  - Change our design capacity assumptions for housing
  - Network Capacity Indication
- During 2020 we expect to;
  - Develop a Hub solution to support multiple public charging points
  - Deliver Connect and Manage equipment for hotspots

# Publications and Advice

- Our Strategy and all related documents
  - <https://www.westernpower.co.uk/electric-vehicles>
- Guide on electric vehicle charging and DNO engagement for local authorities
  - <https://www.westernpower.co.uk/downloads/15766>
- Getting electric vehicles moving guide
  - <https://www.westernpower.co.uk/downloads/3220>
- Electric Vehicle Emissions Testing report
  - <https://www.westernpower.co.uk/downloads/1957>

# Questions?

- Coffee

# Connections Update

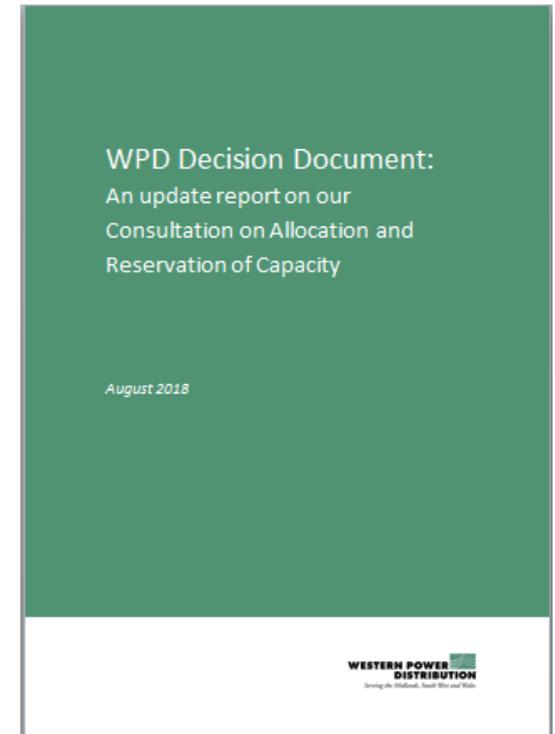
3<sup>rd</sup> April 2019

Vanessa Buxton – Connection Policy Coordinator

# Connections Update

## Capacity Allocation and Reservation

- We consulted on the issues we are encountering, setting out some proposals on our minded to approach in how we allocate network capacity and allow customers to reserve it at three key stages of the connection process;
  - Application
  - Acceptance of offer
  - Energisation and subsequent build out
- A subsequent report was issued setting out the conclusions we have drawn having considered all the customer responses



# Connections Update

## Capacity Allocation and Reservation

- The update set out a number of key areas for development:
  - **Letter of Authority** – establish process for the use of an LoA to substantiate the application in terms of establishing the applicant's relationship with the landowner
  - **Application information requirements** – update ground rules for information requirements in order to secure capacity under a formal Connection Offer
  - **Connection Offer Milestones** - review and extend existing milestones thus strengthening our ability to ensure projects which are able to progress and have been granted the appropriate planning permissions etc. can do so
  - **Development Phase** – following the implementation of DCP294, review and clarify the applicant's ability to ramp-up capacity requirements for up to five years post energisation

# Connections Update

## Capacity Allocation and Reservation

- We have been developing policy and process in a number of key areas:
  - **Capacity reservation rules** – clarify policy and process relating to the ability to reserve capacity post energisation using a two-tier system based upon whether or not an applicant has made a financial commitment
  - **Speculative developments** – clarify policy and process relating to existing methodology for dealing with speculative developments by charging an applicant 100% of the reinforcement costs where the development is deemed speculative and charging a capitalised charge for future operations, repairs and maintenance of the distribution system
  - **Infrastructure Offers** – progress the development of infrastructure offers for use on e.g. large domestic or commercial developments where the long term requirements are not fully known and are therefore speculative

# Connections Update

## Capacity Allocation and Reservation

- We have issued a Decision Document setting out our outline policy, available to view at [www.westernpower.co.uk/connections-landing/connections-useful-information/capacity-allocation-and-reservation](http://www.westernpower.co.uk/connections-landing/connections-useful-information/capacity-allocation-and-reservation)
- Policy will be implemented by end of June 2019
- We are mindful of similar work undertaken at industry level; i.e. Open Networks
- We will not consult further but there is still an opportunity to feedback thoughts on the Decision Document

### WPD Policy Decision

Document: An outline policy report on our Consultation on Allocation and Reservation of Capacity

*March 2019*

**WESTERN POWER  
DISTRIBUTION**  
*Serving the Midlands, South West and Wales*

**WESTERN POWER  
DISTRIBUTION**  
*Serving the Midlands, South West and Wales*

# Connections Update

## ICP Portal

- The new ICP Portal has been released which brings commonly used processes into one location
- The portal can be used to:
  - Make a new application for a competitive connection offer (SLC15)
  - Submit self-determined Point of Connection
  - Submit notifications of physical works (LJNC, LJDC, HVCC)
  - Submit completion certificates
- Access requires an account with at least one administrative user assigned for your company

# Connections Update

## ICP Portal – Application for a connection or self-determined POC

- Users may create an enquiry within which they can provide details of the site requirements, including:
  - number of connections
  - required capacity
  - generation technology
  - Capacity ramp up for up to 5 years
- The system asks a number of questions to clarify who will be responsible for the various elements of a connection scheme, including completion of the connection to the existing network, design approval and who will own the constructed assets
- Supporting documents may be attached to a document upload facility, e.g. site layout plans.

Customer Job Reference  
Please enter...

Work Site Name  
Please enter...

Address  
Please enter or search on map...

Postcode\*  
Enter...

Connection Requirements

Capacity (kVA)

# Connections Update

## ICP Portal – Notification of works

- The new ICP Portal enables notifications of works (LJNC, LJDC, HVCC....) to be submitted electronically
- The ICP Portal will identify whether works are approved or rejected
- Users will continue to receive direct communication from local teams with the reasons for any rejection

List your connection activities

Address	Postcode	New connections	Transfers	Is this an IDNO connection?	Status
 Please enter or search on map... 	Enter...	0	0	No 	
 Silverthorne Lane. Temple Meads...	BS2 0NN	0	4	No 	
 Beaconsfield Close. Temple Meads...	BS2 9BU	1 	0	No 	
 Queen Ann Road. Temple Meads...	BS5 9TX	1 	0	No 	

 Please upload drawings for this new connection.  
(We can accept .pdf or .jpg)

# Connections Update

## ICP Portal – Completion certificates

- Where a notification is submitted through the ICP portal, the completion certificate will need to be provided via the same route
- Users can indicate whether or not the works were carried out
- For completed works, users can enter the required details and upload associated documentation including 'As Constructed' drawings

List your connection activities

Address	Postcode	Connection type	Carried out
Silverthorne Lane. Temple Meads, Bristol...	BS2 0NN	 Transfer	Yes 
Column / Plot no.	Date completed	Metered MPAN	Aslaids
Col 3	DD-MM-YYYY	012345678910111213140	 <a href="#">Uploaded_file1-name_here.pdf</a>
Beaconsfield Close. Temple Meads, Bristol...	BS2 9BU	 Transfer	Select 
Queen Ann Road. Temple Meads, Bristol...	BS5 9TX	 New connection	Select 

# Connections Update

## ICP Portal

- The new ICP Portal does not replace existing methods. In addition to the ICP Portal route:
  - Applications for connection may be submitted;
    - Online
    - Using paper based applications
    - Via CIRT
  - Self determined POC's may be submitted;
    - via CIRT
    - Using the email process
  - Notification of works may be submitted;
    - Using the spreadsheet process

# Connections Update

## ICP Portal

- If your company is not yet registered, please contact [wpdconnectionpolmids@westernpower.co.uk](mailto:wpdconnectionpolmids@westernpower.co.uk) and supply the following information:
  - The name of the person who will act as the administrator for your organisation
  - Their email address
  - Company name; and
  - Location or depot address

Once we have created the account, we will issue confirmation, a password and a user guide.

# Connections Update

## Allowable Changes

- The allowable changes guidance was updated in December 2018
- A copy is available to view at:  
[www.westernpower.co.uk/connections-landing/connections-useful-information/budget-estimates-and-feasibility-studies](http://www.westernpower.co.uk/connections-landing/connections-useful-information/budget-estimates-and-feasibility-studies)

Guidance on allowable changes to applications and accepted offers for connection to WPD's Distribution System

**WESTERN POWER**  
**DISTRIBUTION**  
*Serving the Midlands, South West and Wales*

V3 December 2018

# Questions?

# Review and next steps

---

- Your feedback on today's topics
- Question - have the responses provided satisfactory updates?
- Question – any other areas you would like further detail on for a future session?
- Question – future meeting arrangements