

Serving the Midlands, South West and Wales

CiC Group meeting 28th November 2017

Simon Pett
Network Services Manager
East Midlands



- Welcome & housekeeping
- Introductions
- Purpose of the group
- High level updates since June CiC event at Gloucester
- Design Approval Seth Treasure
- 11:30 Coffee
- Multi stage infrastructure development Tim Hughes
- 12:45 Lunch
- Estate & Wayleaves update Bruce Pollard
- 13:45 Review/close

Purpose of the group



- Serving the Midlands, South West and Wales
- Provide feedback on the effectiveness of the WPD Competition in Connections service and plan for future developments
- Act as a source of and a sounding board for new ideas
- Advise and draw attention to key issues of current or emerging CiC concerns
- Influence WPDs strategic objectives and future plans for connections services
- Influence and feedback on WPDs connections performance indicators
- Support and facilitate joint-working between WPD and CiC stakeholders
- Develop tactical solutions to issues identified where there is benefit to the wider CiC customer group
- Drive industry best practice

Frequency and outputs



- The CiCG will meet on a rolling three times per year cycle with each event focusing on a specific area of CiC activity.
- Each of the meetings will follow the following format:
- 1. WPD to provide an update on progress against the agreed CiC actions in the ICE plan
- 2. Identification of further area(s) for improvement
- 3. Share ideas and options relevant to the area of improvement
- 4. Develop an agreed action for the next review meeting

Communication



• Intention is to publish material, attendees and summary notes on the WPD external web site



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



Initiative - Improve information and processes in place to facilitate the self design of substations by ICPs.......

- 4.11 Event held on the 1st November in Bristol covering changes to HV and small LV designs
- Shared the survey results relating to perceived inconsistencies in policies (4.1) with delegates for discussion of further enhancements
- The details were also circulated to users of the Techinfo website.



Initiative – Option 4 for HV self connect......

- 4.15 Implement as business as usual across all four WPD licence areas – completed
- 4.16 Support the submission of a change proposal to include option 4 in the CiC COP – completed from a WPD perspective



Initiative – Identify ways to improve speed and efficiency of processes where ICPs are looking to undertake self-design......

 4.18.2 - WPD to review the LV Matrix for simple LV POC selfdeterminations to identify scenarios when it may fail.
 Investigate improvements to increase scenarios where matrix can be used to determine the POC – complete

Issued:

 ST:SD5F – Connecting multiple small low voltage connections with minimal network analysis



 4.18.9 - Implement new process and procedure to facilitate self-determination of simple HV POCs within certain criteria of a standard matrix, without the use of HV design software packages. Develop new policy to facilitate the use of simplified load flow techniques for 11kV design.

Issued:

 ST:SD4D – The use of simplified load flow techniques for HV network design



- 4.18.5.1 Review the WPD Techinfo website to identify improvements in access and navigation and content.
 - All content was reviewed and scanned PDFs removed
 - Search facilities improved from review of key words
 - Guest access provided

Initiative - WPD will develop policy and procedures to incorporate storage schemes into ST:SD1E covering G100 (Technical Guidance for Customer Export Limiting Schemes)

 10.8 - ST:SD1E Reviewed and published and disseminated to stakeholders via Techinfo site. POL:SD10 enhanced for alternative connections



 4.18.1 - Undertake a survey of ICPs to understand their views on the WPD CIRT system (from those who use it and those who do not). Use this feedback to inform CIRT developments and improvements

50 ICPs contacted
12 Responses
Of the 12 responses 7 currently using CIRT
Majority rated it highly

Currently evaluating the next steps



- 4.18.3.1 Produce and publish new guidance information to assist ICPs in understanding the options WPD make available for them to carry out unmetered connection activities – due Q4 2017
- 4.18.4 Develop implement and communicate process for ICPs to be able to email self-service notifications as an alternative to WPD's CIRT online applications – due Q4 2017
- 4.18.6.1- Make further improvements to the visibility and transparency of the inspection and monitoring regime: Revise the monthly report issued to ICPs, to provide more clarity/detail relating to inspection levels they are on for each activity due Q1 2018.



- 4.24 Investigate whether improvements can be made to streamline the process for ICPs undertaking LV live jointing works for unmetered connections – due Q1 2018.
- 4.27 Create and publish new high level guidance information and website area for ICPs. Include e.g. key contacts, processes signposted with where to find more information and what agreements are available – due Q2 2018.



Serving the Midlands, South West and Wales

Design Approval Process

With reference to Standard Technique : NC2F



- WPD has a duty to ensure that any adoptable electrical infrastructure is fit for purpose and provides a secure and reliable supply of power to existing and proposed customers.
- An Independent Connection Provider (ICP) is allowed to provide a design for connection infrastructure which is deemed contestable works in WPD's Statement of Methodology and Charges for Connection.
- Part of the planning process, prior to construction, is to carry out an assessment on a proposed design.
- Regardless of whether an ICP has the accreditation for self determination of a point of connection (POC) and/ or self approval of the contestable design all network designs are to be submitted to WPD.
- The assessment of an ICP design at the planning stage is called
 Design Approval.



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When to submit a Design Approval pack

Design Submission trigger

- When an ICP is to submit a design depends on the enquiry type that has been raised.
- Where an ICP elects to carry out **both** the self determination of the POC and self approve the contestable design, the design submission trigger will be dependent on whether or not the enquiry was generated through CROWN Internet Routing and Tracking (CIRT).

Enquiry Type	When to submit design
CIRT generated enquiry	On completion of CIRT enquiry activity 'POC Acceptance – ICP Quote Accepted'
Non – CIRT generated enquiry	As soon as possible after acceptance of WPD offer.



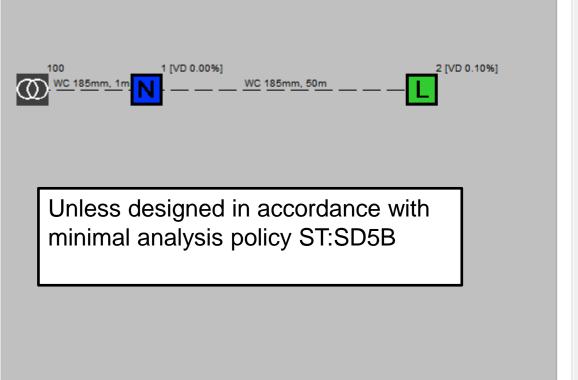
When to submit a Design Approval pack

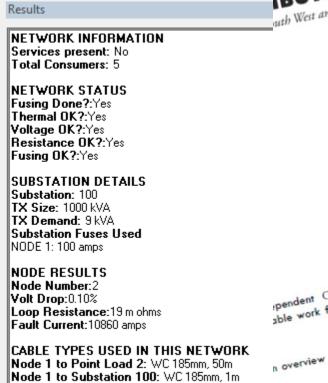
Where the ICP requires WPD to approve a design which has not been self approved, the design should be submitted as soon as possible after acceptance of the WPD quote.



As per WPD Company Directive Standard Technique: NC2F <u>all</u> of the following documents are to be included in the submitted design approval pack:

copies of input and output from the design package used:







As per WPD policy Standard Technique: NC2F the documents required to be submitted are <u>all</u> of the following:

- copies of input and output from the design package used;
- a statement of the design parameters used;

Specific design submission forms can be found in some design policies, namely:

- ST:SD4AST:SD4D
- □ ST:SD5B
- □ ST:SD5F
- □ ST:SD5K

High Voltage	Design - Design
Site Address	
Designer	
Company Name	
WPD Auditor	
Managed Unit	
Requested load (d	emand only)
Number of MPAN's	s to be created
Power Factor	
Load profile - cycl	lc or sustained?
Any motors / gene	rators > 50kW? *

DESIGN SUMBISSION FORM - EXAMPLE

Section A - Your Details:

ICP reference: N/A WPD Reference: 12345

Site address: 12 Acacia Avenue, Bristol, BS2 OTB

WPD Responsible Team: Bristol Construction

Section B - Connection Details:

Requested Capacity (kVA): 300kVA Rating of Transformer (kVA

Connection Security (Ringed or Teed): Ringed

List of Lostellad Continuous Discourse BN3C F0014/A transfer



As per WPD policy Standard Technique: NC2F the documents required to be submitted are <u>all</u> of the following:

- copies of input and output from the design package used;
- a statement of the design parameters used;
- a drawing (typically to scale 500/1) showing the network layout to a suitable scale showing, routes, joint positions, cable sizes, link boxes and LV phase connections;



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- copies of input and output from the design package used;
- a statement of the design parameters used;
- a drawing (typically to scale 500/1) showing the network layout to a suitable scale showing, routes, joint positions, cable sizes, link boxes and LV phase connections;
- All information as indicated by requirements of the appropriate G81
 Framework document as supplemented by the WPD Appendix.

PRODUCED BY THE OPERATIONS DIRECTORATE OF ENERGY NETWORKS ASSOCIATION



Engineering Recommendation G81 Part 1
Issue 3 2016



Design Approval

- Design approval is governed by a Standard of Performance in accordance with licence condition 15.
- Self-approved designs submitted from ICPs, with the appropriate accreditation, are excluded from detailed approval. However, some designs shall be 'dip checked' to prove compliance in accordance with the Framework Network Access and Adoption Agreement (FNA&AA).
- For design submissions which are <u>not</u> self-approved, the Guaranteed Standard time clock for WPD design approval (10 days LV / HV and 20 days EHV) will start when the WPD planner has received the ICP's design approval pack.
- If WPD determines that the minimum information has <u>not</u> been received, the design submission will be rejected. This stops the Guaranteed Standard 'clock'. The ICP would then be contacted to resend the required material.



Design Approval

The approval process consists of the WPD planner:

- Determining if the ICP has submitted all required documentation.
- Ensuring compliance with all applicable engineering standards and statutory legislation as identified in G81, Part 1 - Design & Planning Framework Document and WPD's Framework Appendix.
- Confirming that all WPD policy relevant to the proposed connection works have been complied with.

Common policies include:

- ST:SD5A Design of LV domestic connections
- ST:SD5R Earth fault loop impedances at LV installations
- ST:TP21D 11kV, 6.6kV and LV system earthing
- □ ST:SD8B Cable ratings
- ST:SD4A Design requirements of 11kV and 6.6kV Networks



Design Approval

Some WPD Policy has tabulated assessment criteria to which the ICP design pack can be assessed.

Does the connection conform to the following requirements?	
The requested load is ≤ 200kVA and evenly balanced	
The Distribution transformer is rated $\geq 315 \text{kVA}$	
The requested load is ≤ 150kVA for a single point load onto a 315kVA distribution transformer	
The Distribution Transformer has sufficient capacity (Existing load including ASC + Proposed load)	
The Maximum load on the individual transformer fuse way is \leq 217kVA / 315A per phase	
The existing network has a continuous three phase conductor with a minimum conductor size of 185mm ² aluminum or equivalent rating for a copper conductor	
The maximum length of conductor from the Low Voltage cabinet to the point of connection of the furthest service joint is ≤ 250 m for loads ≤ 150 kVA	
The maximum length of conductor from the Low Voltage cabinet to the point of connection of the furthest service joint is ≤ 200 m for loads ≥ 150 kVA	
The service length is $\leq 30 \text{m}$	
Any Generation complies to Engineering Recommendation G83	

- Assessment against a policy without an assessment criteria form would be judged against the main body of the policy.
- Policies are written in such a way that the section headings are used as assessment points and the assessment outcome would be determined by assessing compliance of the ICP design and statements against the content of each section.



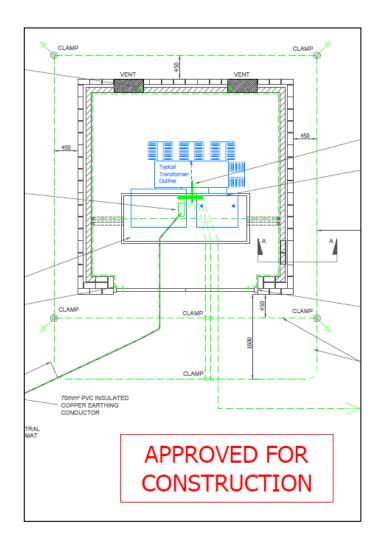
Pre Approved Designs

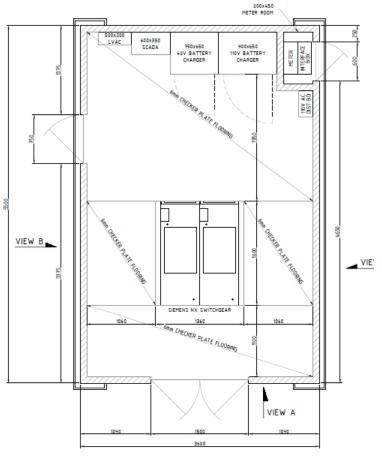
- WPD will consider generic design arrangements for connections where a standard arrangement is to be used in multiple locations by a customer, ICP or manufacturer.
- Submissions for generic design approval should be made via the WPD Policy Manager.
- Non-site-specific elements such as switchgear, buildings and battery chargers.
- Once approved, designs shall be given a unique reference number to be quoted whenever the design is utilised.

WESTERN POWER



Pre Approved Designs





PLAN VIEW OF SWITCH HOUSE



Design Approval Outcome

The outcome of the design approval assessment results in either an:



Approved design

or



Rejected design

Rejected Design

- The WPD planner shall contact the ICP to explain the reason(s) as to why the design failed the approval process.
- The ICP should either correct the issue or contact the WPD planner to

Rejection Date	08/11/2017	
Reason For Rejection (Provide detail of rejection for includion in E-Mail to ICP	ICP Design approval pack does not include assessment study. Plan does not show phasing.	
	OK Cancel	

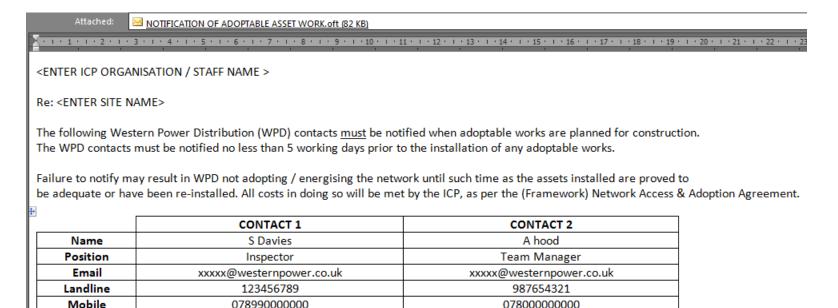
WESTERN POWE



Design Approval Outcome

Approved Design

- The WPD planner shall contact the ICP to confirm that the design has been approved.
- The ICP will also receive contact details of the WPD technician and team manager for communication during the construction stage.



I attach a template notification email. Please can you ensure whoever is responsible for notifying WPD of the construction of adoptable work has access to it and understand the requirements.

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Further Information

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Further Information

WPD Design Approval Policy – ST:NC2F

westernpower.co.uk

Main hub for third party information (see Provision of Information handout)

Website CiC section contains links to:

- Technical Information website (WPD policies, techniques and EE specs)
- DataPortal2 (Electronic Mapping Utility [EMU] and design package datasets)
- Network capacity mapping (traffic light style headroom indication map)
- CROWN Internet Routing and Tracking (CIRT)



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Home Power cuts

Connections

Services About us

Safety & educa

Provision of Information

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Technical Information Website



westernpower.co.uk

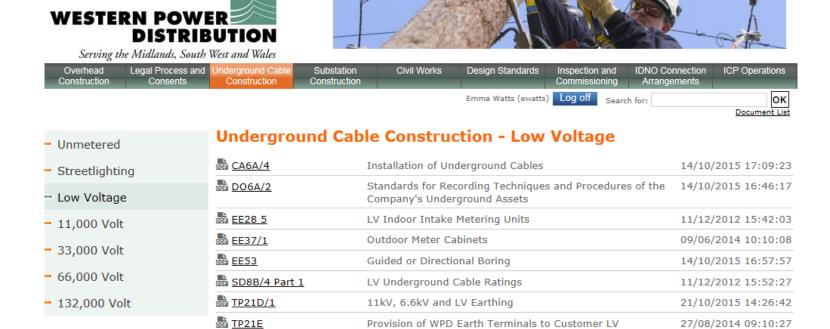
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Technical Information Website

www.westernpowertechinfo.co.uk

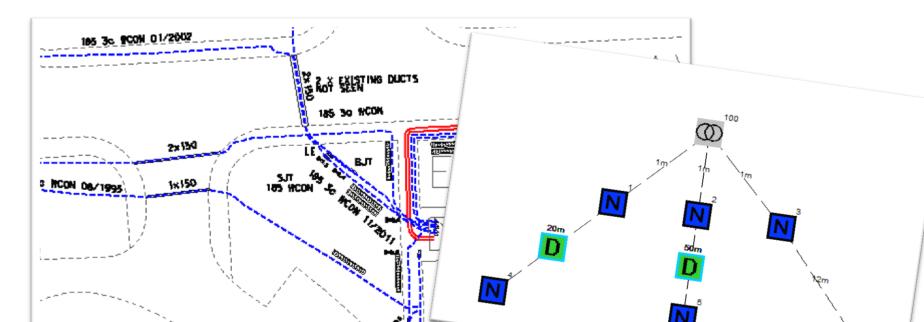
- Registration or guest access
- Displays WPD policies, techniques and EE spec.
- Documents easily navigated by category and searchable by word.



DataPortal2

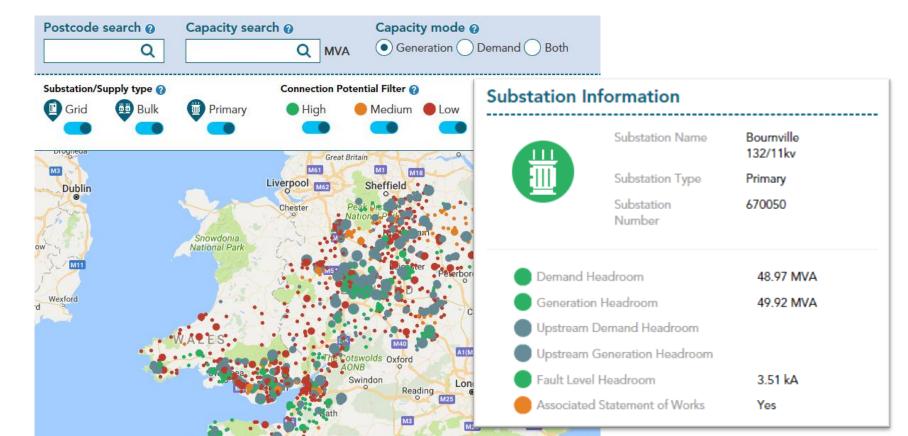
www.dataportal2.westernpower.co.uk

- Requires registration.
- User friendly online interface to network mapping information – EMU.
- Access to LV and HV design package datasets.



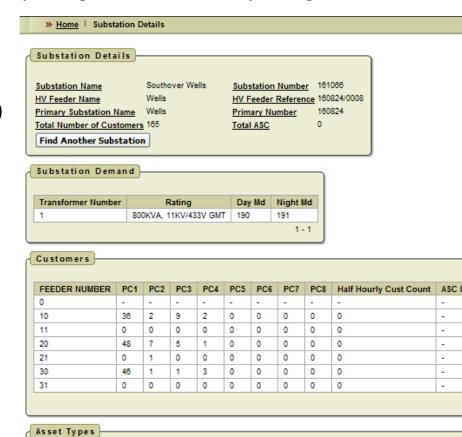
Capacity Indication Map

- Open access to all.
- Traffic light indication of capacity 'headroom'.



CROWN Internet Routing and Tracking (CIRT)

- Registration required
- ICP's can obtain the following information by using the online CIRT package:
 - -Substation Name & Number
 - -HV Feeder Reference
 - -Primary Substation Name & Number
 - -Total number of Customers
 - -Total Agreed Supply Capacity (must be reserved)
 - -Day MD & Night MD
 - -Transformer Size & Voltage
 - -LV Cabinet / Pillar size
 - -HV Switch Type
 - -Automation assets
- Then per LV Feeder:
 - -Feeder Number
 - Number of Customers by Profile Class
 - -Number of Half Hourly Customers
 - -Number of IDNO Customers per substation
 - Agreed Supply capacities per feeder



G.E.C.

Pauwels Trafo, Ireland

XF Type TLF I

800KVA, 11KV

SWEB Asset Types, Ancillaries, Protectn Rmu Cb

SWEB Asset Types, Windings, Transformer, GM, HV/LV

Notes / Your questions

If required, please write down any additional comments or questions you have. Please include your name and email address so that I can respond to you.

Name:	Email:
1.	
2.	
3.	
4.	

Please tear off and hand to me at the end of the session - we appreciate your feedback

Design Approval



Summary

- Reviewed feedback received
- Are there further enhancements we could make?



Serving the Midlands, South West and Wales

Capacity allocation and reservation

Tim Hughes Connection Policy Manager Tuesday 28th November 2017

Capacity allocation and reservation

Background

- WPD have seen a large increase in the volume and size of applications for large demand domestic and commercial developments
- The 'style' of application has changed from having firm or certain requirements and timescales for a defined phase, to be for multiple undefined phases and / or end user capacity requirements
- These development often have long and/or uncertain development build-out timescales
- The network is becoming 'full' and capacity is being increasingly constrained on large sections of the network
- New developments are increasingly seeing their connection offers include significant reinforcement costs and in some cases delays while this work takes place



Potential consequences of current situation

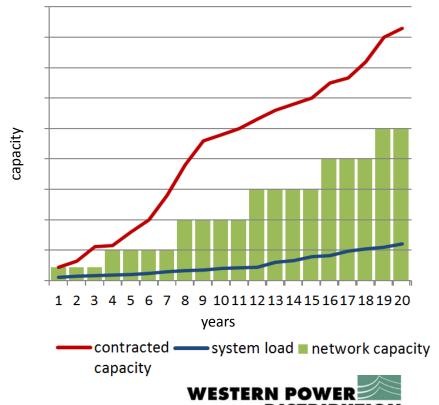
- Large amounts of capacity reserved on a first-come-first-served basis without firm requirements and with very long lead times
- New connection offers designed based on connected and contracted capacity (on accepted offers)

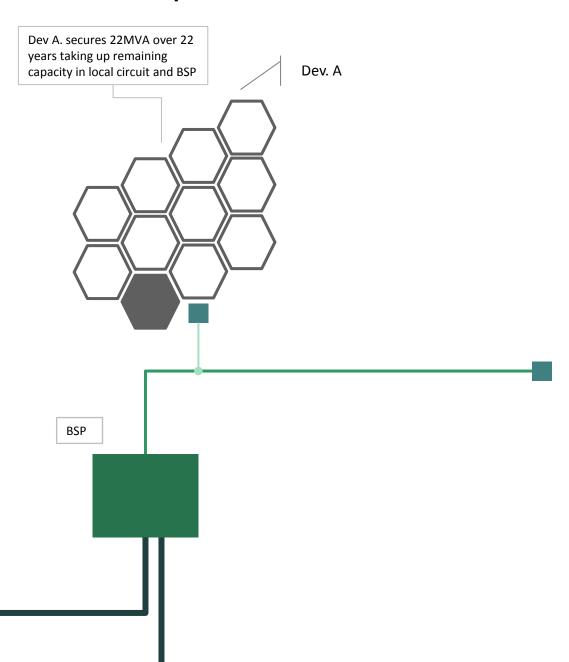
Network becomes 'full' with contracted capacity but actual network demands are

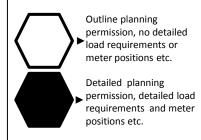
much lower

 New customers may face delays and need to make contributions towards significant reinforcement costs due to existing capacity taken up by long term speculative sites

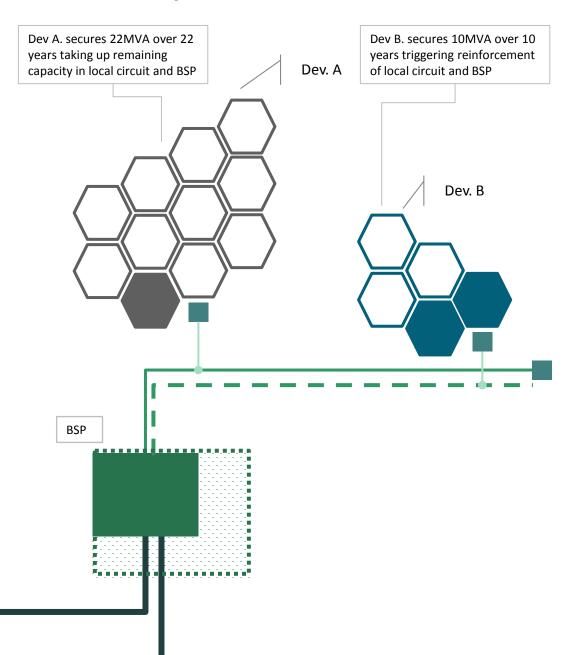
 If contracted reserved capacity does not materialise, reinforcement and sole use assets may be constructed which were not required

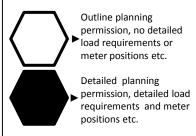




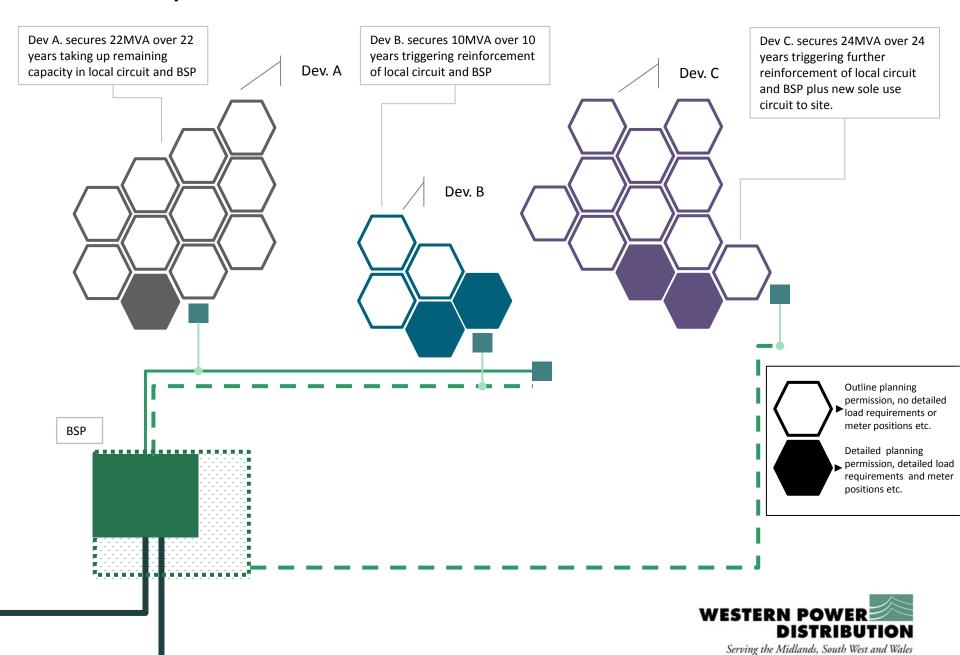


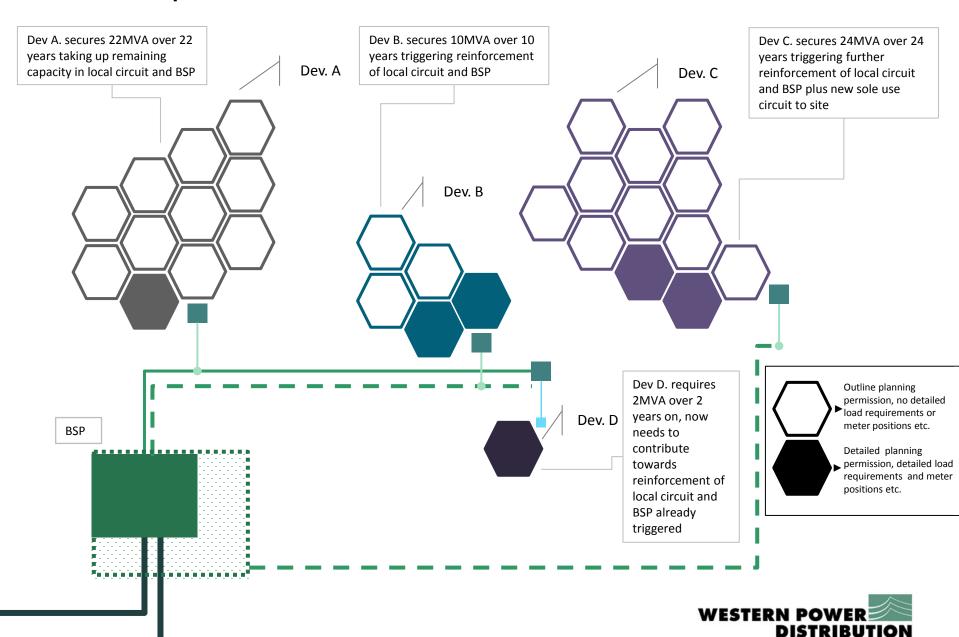












Is there a more pragmatic and fairer approach to allocate and reserve capacity?

Our considerations

- What information should the applicant provide in order to validate specific capacity requirements?
- How should WPD use that information to determine the level of response?
- Is there a reasonable time upon which capacity should be able to be reserved?
- Should there be different criteria applied to existing network capacity (with no contribution from the connectee) and new constructed capacity (contributed to by connectee)?



Your views and experience

Your views

- We want to understand your views on what may be the fairest approach to the allocation and reservation of capacity
- What are the factors affecting how you apply for connections and capacity which determine the approach you take?
- Over what time scales do you think it is reasonable to secure capacity ahead of its actual usage?
- We want to know how you think we should treat the allocation of capacity at key stages;
 - Application
 - Acceptance
 - Energisation



Next steps

- WPD will issue a consultation on our proposed approach to capacity allocation to new connection requests and the reservation of capacity
- We will be seeking views on what is the fairest approach for all customers using real life scenarios
- We will use the consultation responses to refine the approach and help to select the best way forward
- Our aim is to issue revised policy and guidance to ensure all stakeholders are aware of the criteria, requirements and approach to take when applying for new connections



Consultation process

• Issue consultation document Dec'17 Review responses to consultation Feb'18 • Issue decision document Mar'18 Implement as BaU Apr'18



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New Connections Legal Process



- New external website
- New guidance documents
- New intranet
- New case tracking information
- New approach to the legal process



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- WPD CIRT access (Q4 2017)



- Geldards case management system access (Q2 2018)



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Collaborative Partnership Protocol for Lawyers

- 50 days to completion
- Encouragement of grown-up lawyer:lawyer relationships
- Focus on success for a common customer
- Focus on connection target date
- Tracking and prompts

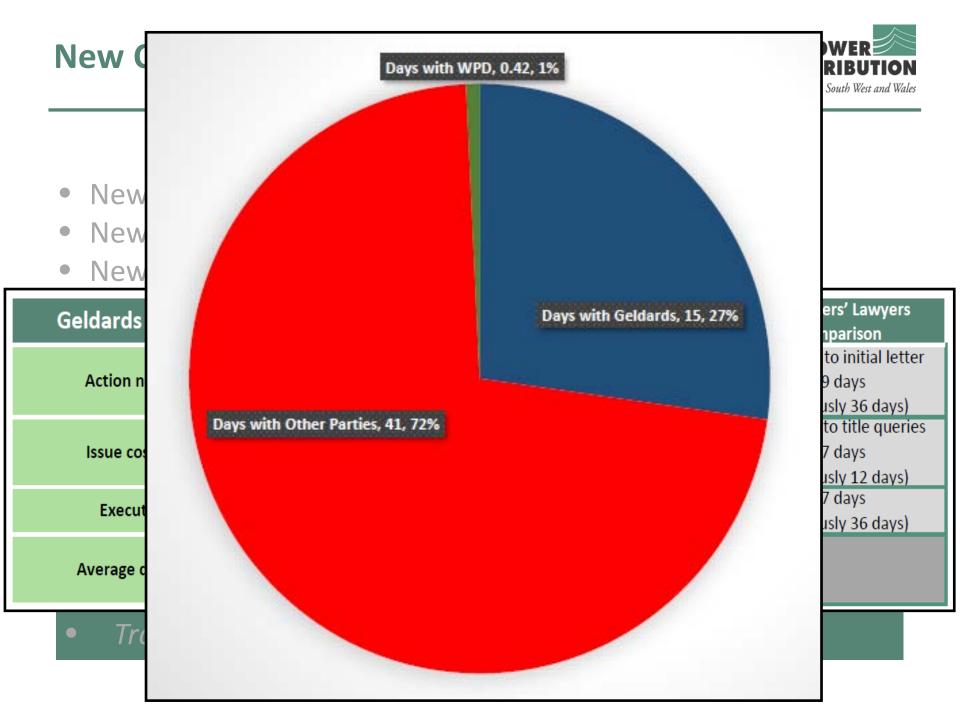


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Geldards KPIs - Q2 2017	Target	Actual	Customers' Lawyers Comparison
Action new instructions	2 days	Day zero (no change)	Response to initial letter 29 days (previously 36 days)
Issue cost undertakings	2 days	Day zero (0.6 days) (previously 3 days)	Response to title queries 37 days (previously 12 days)
Execute documents	2 days	2 days (no change)	37 days (previously 36 days)
Average days to complete	20% improvement on y/e 31.03.2017 (75 days)	79 days (previously 82 days)	

Tracking and prompts





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Estates & Wayleaves



Summary

- Multiple enhancements to the process
- Dependant on multiple legal interfaces
- Are there further enhancements we could make?



Summary

- Shared the purpose of the group
- Provided high level updates on existing and new ICE actions
- Detail presentation provided on 2 areas
- Consultation process for staged infrastructure development

Review/Close



What next?

Feedback is welcome

Is there a specific area or two we need to focus on with you?

Review/Close



Thank you

Have a safe journey home