

# SPM ICP Workshop

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19<sup>th</sup> September 2018

# Safety Contact

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**Welcome**

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**Andy Churchman**

# Agenda

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**09:00 Registration/ Tea & Coffee**

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**09.30** Welcome & Introduction

**09:45** Connection Offer Expenses

**10:15** Land & Planning Update

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**10.40 Coffee Break**

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**11.00** Radar Working Group

**11.30** G98/G99 Process

**12:00** EV

**12:20** ICE

**12.45** Summary and Next Steps

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**13.00 Close & Lunch**

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# SP Manweb Update – Areas of Responsibility

## North Wales

**District Manager-** Andy Churchman  
**Head of Planning & Design-** Terry Jones  
**Head of Delivery-** John Heathman

## Wirral

**District Manager-** Jane Wilkie  
**Head of Planning & Design-** Dewi Jones  
**Head of Delivery-** John McWilliams

## Dee Valley/ Mid Wales

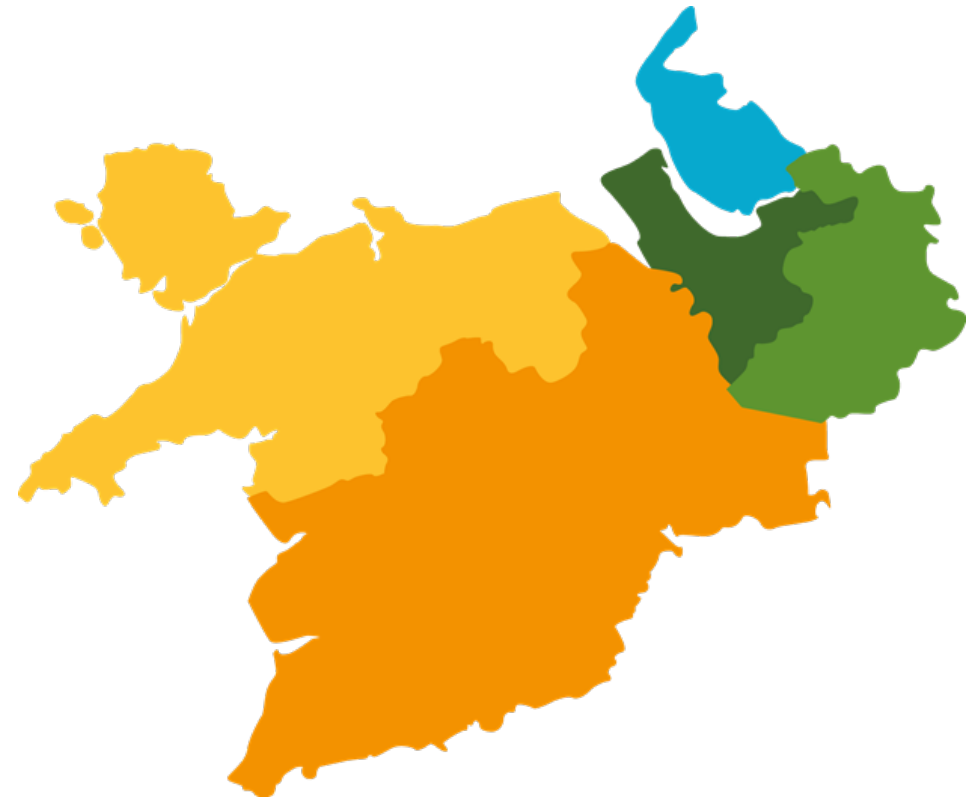
**District Manager -** Liam O’Sullivan  
**Head of Planning & Design-** Gary Barnes  
**Head of Delivery-** John Heathman

## Merseyside

**District Manager-** Andrew Lloyd  
**Head of Planning & Design-** Neil Woodcock  
**Head of Delivery-** Mark Barry/ Paul Thomas

## Mid Cheshire

**District Manager-** Tom Walsh  
**Head of Planning & Design-** Ken Brassington  
**Head of Delivery-** Andy Jewell



## 132kV Business SP Manweb

**Business General Manager –** Alyn Jones/ Mark Sobczak  
**132kV Programme Delivery Manager**  
Huw Thomas

***Andy Churchman has overall responsibility for all Connections Activities in SP Manweb***

# SP Manweb Update – Other Engagement Contacts

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## Land & Planning

Ross Baxter - Land & Planning Manager

Rachel Pitt-

Jo Baugh - Land Team Leader

## System Design

Sue Pilcher

Lead Engineers, System Design Merseyside

Andy Beddoes & Jon Mitchell

Lead Engineers, System Design North Wales

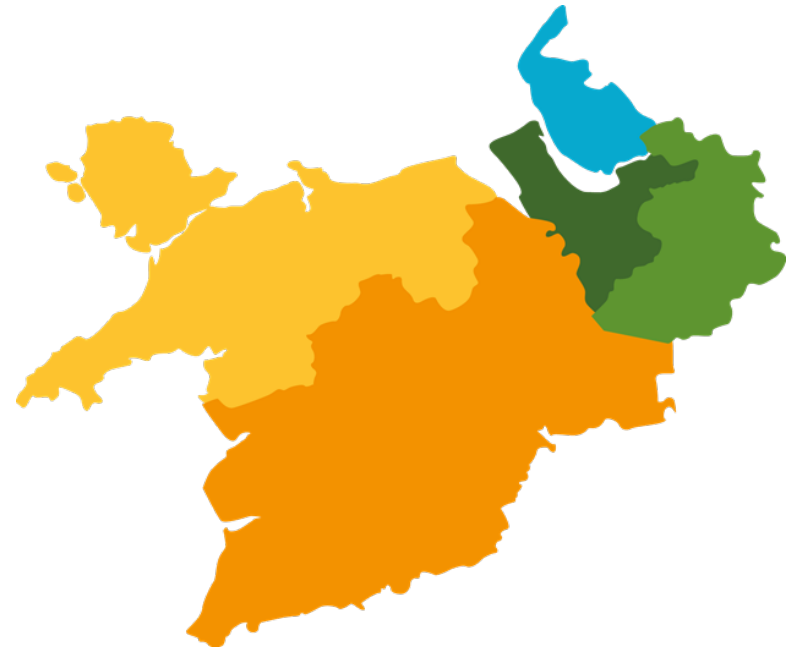
Mark Lyon & Myles Buckley

Lead Engineers, System Design Cheshire

## Stakeholder Engagement Team

Rachel Shorney - Stakeholder Engagement Manager, SP Manweb

Louise Taylor - Customer Engagement Manager, SP Manweb



# Connection Offer Expenses

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Mike Scowcroft

# Connection Offer Expenses

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- Some concerns have been raised about apparent inconsistencies and lack of transparency
- This presentation focuses on explaining some of the differences
- We are looking for feedback on the different approaches



# Connection Offer Expenses

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What was BEIS trying to achieve....

*“We believe that doing so is fairer, with more applicants paying towards the costs of preparing connection offers and that it would bring further benefits in improving the efficiency of the connections process and the service applicants receive.”*

*Source: BEIS Consultation on Assessment & Design fees: Government Response  
February 2018*

# Why do DNOs have different charges?

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The initial range of fees is not unexpected



- DNOs share a common obligation to have cost reflective charges but
  - The new Regulations were not prescriptive
  - DNOs do not discuss charges due to Competition Act requirements
- Charges were therefore calculated independently

DNOs have reviewed the differences in high level charging principles to understand better how this results in different charges

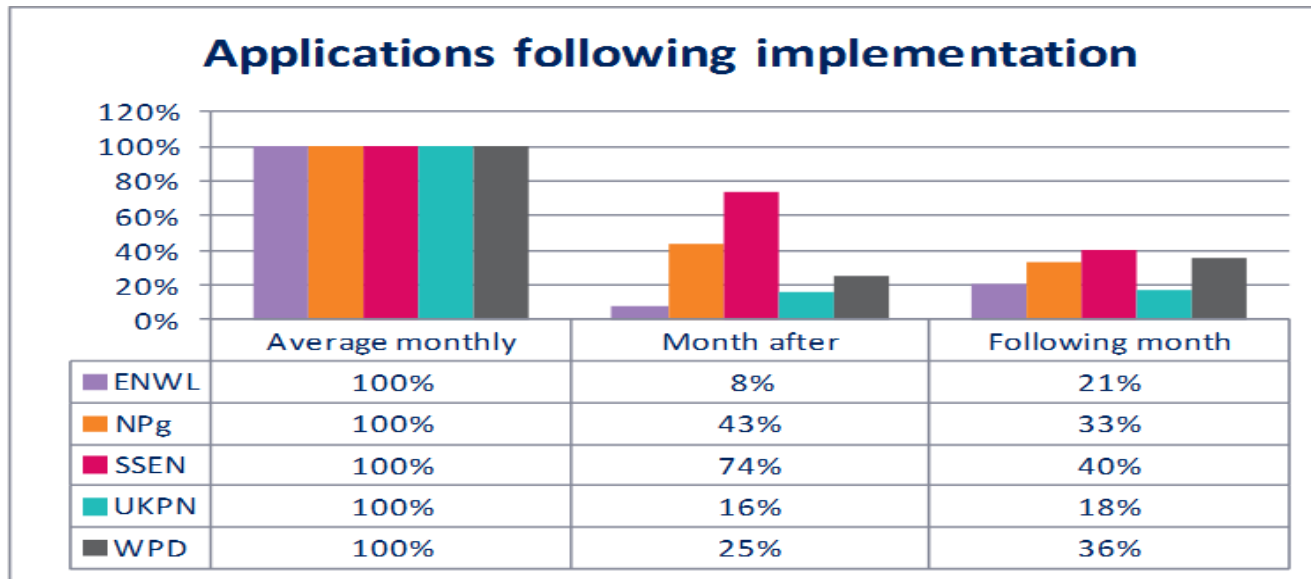
DNOs sharing these to help explain some of the apparent differences in charges

# DNOs have different charges for quotes

|                 | ENWL        | NPg         | SPEN        | SSEN        | UKPN        | WPD         |
|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Demand LV work  |             | Implemented |             |             |             |             |
| Demand HV work  |             | Implemented |             | Coming soon |             |             |
| Demand EHV work | Implemented | Implemented |             | Coming soon |             | Implemented |
| Demand 132kV    | Implemented | Implemented | Implemented | Coming soon |             | Implemented |
| DG LV work      |             | Implemented |             |             |             |             |
| DG HV work      | Coming soon | Implemented | Implemented | Implemented | Implemented |             |
| DG EHV work     | Implemented | Implemented | Implemented | Implemented | Implemented | Implemented |

 Implemented  
 Coming soon

# What has happened so far



Typically DNOs saw

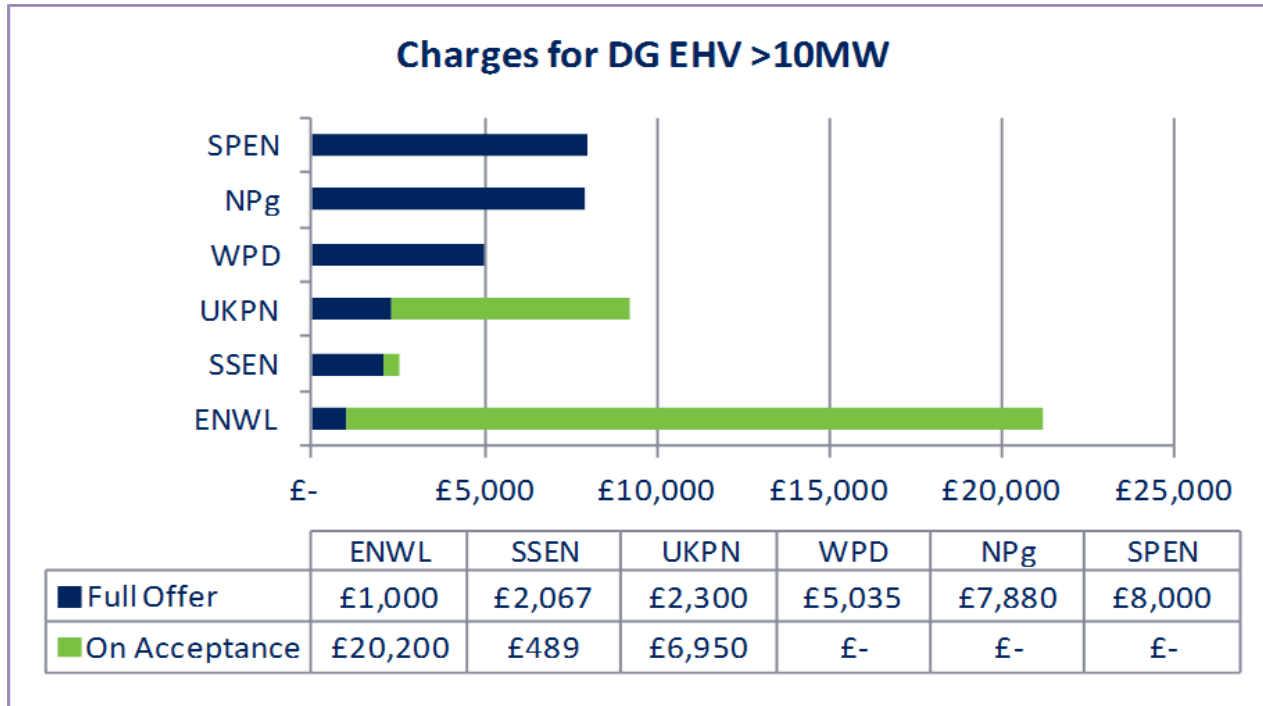
- an increase in applications just prior to implementation
- a significant decrease post implementation
- an increase in budget quote applications

# The legislation allows for options for cost recovery

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| All quote | Part Quote/Part acceptance |
|-----------|----------------------------|
| NPg       | ENWL                       |
| WPD       | SSEN                       |
| SPEN      | UKPN                       |

# The legislation allows for options for cost recovery



Above shows published charges for DG EHV >10MW

Shows total charge and timing of recovery

This doesn't show costs recovered as an on-cost

# Connection Offer Expenses

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There is a mix of approaches that have been used by DNOs.

Each has pros and cons for different stakeholders

Is there any views on which approach is preferred?

- And why?

For example...

*Is full recovery of the quote costs as a COE charge preferred?*

*Should Budget Estimates and Quote+ be charged by SPEN?*

*Should SPEN extend COE to all market segments?*

# Land & Planning Update

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Rachel Pitt



**Action 1: Establish a land Rights Stakeholder Panel to examine our Land Rights processes from a Customer perspective, with the aim of identifying any opportunities for improvement.**

- Key stakeholders have been invited to our Land Rights Stakeholder Panel in September 2018
- We would like feedback on; our approach, the process and improvement areas

**SP Manweb**

**Wednesday 19<sup>th</sup> September 2018  
1PM – 4PM  
at the Doubletree by Hilton, Chester, CH2  
3PD**

**SP Distribution**

**Thursday 20<sup>th</sup> September 2018 from  
1.30PM – 4PM  
at ScottishPower HQ, 320 St Vincent Street,  
G2 5AD**

| Action  | Due Date  | % Complete |
|---|-----------|------------|
| Identify internal and external stakeholders                     |           | 100%       |
| Issue formal invites  |           | 100%       |
| Facilitate Stakeholder Panel                                    | Sept 2018 | Ongoing    |
| Agree top 5 actions   | Oct 2018  |            |
| Prepare implementation plan                                     | 15/10/18  |            |
| Share actions and proposed solutions/progress with stakeholders | 31/10/18  |            |

**Action 2: Communicate our Incorporated Rights Process available for use by IDNOs, active in our SPM License area, and will publish guidance documentation in relation to this process.**

- Process document has been finalised with SPEN sign off
- New applicants should contact Jo Baugh (Land Team Leader), after this we will instruct our Legal Team to discuss Heads of Terms and agree draft legal documents with you
- We have scaled costs for the service based on criteria which the Land Team will discuss with you
- We have created a helpful guide for both our “usual” and Incorporated Rights process to be published with the process document 1<sup>st</sup> October

| Action   | Due Date     | % Complete |
|--|--------------|------------|
| Write incorporated rights document                                   |              | 100%       |
| Review process document with Legal and the business                  |              | 100%       |
| Refresher training roll-out to land team(s)                          | Sept 2018    | Ongoing    |
| Publish process to the website                                       | Oct 2018     |            |
| Confirm process and ensure stakeholder awareness – Stakeholder Panel | Sept 2018    |            |
| Measure volumes of applicants to this process                        | Oct/Nov 2018 |            |

## Why?

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- ✓ Better **engagement means** better **understanding** of the **Customer** journey
- ✓ As we look to **improve**, we want to ensure this is **meaningful to You**
- ✓ We have a **responsibility** to ensure our customers know **what we do** and **why do it**

# Continuous Improvement

Closely working with design and delivery

Reporting of throughput & quality audits

Increased awareness of our processes and lead times



Sign posted Land Rights information; costs and timescales – setting realistic expectations

Better information for our customers

**BREAK**

# Radars Working Group

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Andy Churchman

# Radar Working Group

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- Our last ICP Workshop took place in April 2018
- Feedback received from this session was that there are numerous issues that our Stakeholders are having with Radar.
- From this we created a Radar Working Group which contained a small number of Stakeholders that requested to take part.
- After this session we created an action plan internally on how we can move forward with all of your issues that we are going to discuss further today.
- We have sent you all a copy of our draft training documents for you to comment on. Feedback will be greatly appreciated.

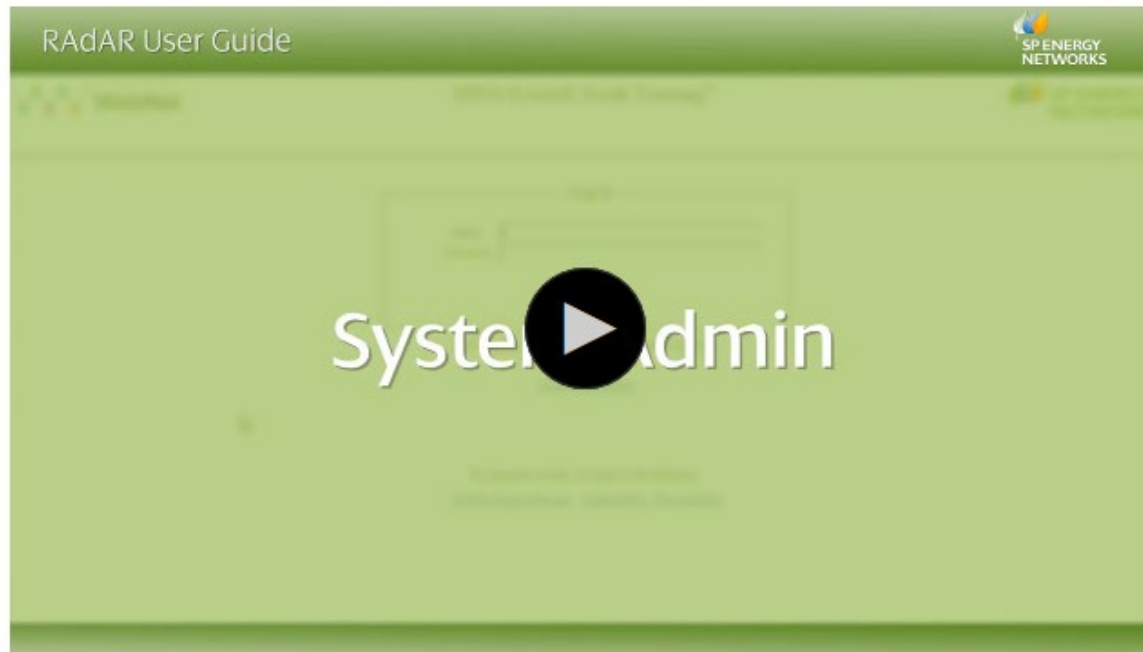
# Radar Working Group

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- We also have YouTube clips available on our website that can be used for guidance

RAAdAR Training Videos (Added April 2018)

1. System Admin



[https://www.spenergynetworks.co.uk/pages/radar\\_training\\_materials.aspx](https://www.spenergynetworks.co.uk/pages/radar_training_materials.aspx)



# Action Plan- You said, we have done

| No | Issue   | Action  |
|----|---|---|
| 1  | Some staff rejecting application/design etc., before contacting the customer first  | If you email the CiC Admin Mailbox it will be referred to the relevant District Design/Delivery Manager who will address with the individual  |
| 2  | Future load not always included in the quote when details completed on the form – there should be a conversation to discuss inclusion in the quote, otherwise should always be included | If you email the CiC Admin Mailbox it will be referred to the relevant District Design Manager who will address with the individual   |
| 3  | How quickly self-determined enquiries are responded to - are there checks in place  | RAdAR is being monitored to ensure all responded to promptly  |
| 6  | SPEN contact details need to be updated with current contact details  | SPM details have been updated and SPD in progress   |
| 11 | Civil drawings (substation) documents to be added to website(others DNOS provide) can we give access to a central area where the up to date drawings are available                      | Now available on the website<br><a href="https://www.spenergynetworks.co.uk/userfiles/file/SUB-03-017-Appendix-1.pdf">https://www.spenergynetworks.co.uk/userfiles/file/SUB-03-017-Appendix-1.pdf</a> |
| 14 | Lack of consistent communication within SPEN  | If you email the CiC Admin Mailbox it will be referred to the relevant Manager who will review and ensure consistency of information and process  |
| 18 | Website – if one of the links is not working on the CIC section of the site or there are any suggestions of information you would like to see   | If you email the CiC Admin Mailbox it will be referred to the Pam Baker   |

# Action Plan – Medium Term Plan March 2019

| No | Issue  | Action  |
|----|--|---|
| 4  | Self Determine/Design permitted per DNO area not combined  | Reviewing with the business and update will be provided once agreement reached                            |
| 5  | Transformer Loadings needs to be updated   | In process of being completed. Reviewing current process to enable update more often                      |
| 8  | Wayleaves process query as to why decision re Wayleaves at design stage rather than POC as would save having to refund costs afterwards if made at POC stage | Being reviewed as part of the Land and Planning Update  |
| 10 | Connection Agreements – digitalise forms and could SPEN accept digital signature/copy  | Reviewing with the business and update will be provided   |
| 15 | Conditions Precedent not always being provided or being updated as final/complete so no reporting to UMV   | Business reporting being completed to identify and actions being taken to address. Training to be updated |
| 17 | Where are we upto with Joint sessions with other DNO?  | In discussions to arrange   |

# Action Plan - Long Term Actions – suggest include in 2019/20

| No | Issue  | Action  |
|----|--|---|
| 7  | Guidance provided on use of resubmission & templates as not all aware  | Training documents and method of delivery being reviewed. Interim measure guidance newsletter |
| 12 | Training on RAdAR – look at WEBINAR  | Training documents and method of delivery being reviewed                                      |
| 13 | Multiple applications – Q+ type for RAdAR  | Training documents and method of delivery being reviewed. Interim measure guidance newsletter |
| 15 | Conditions Precedent not always being provided or being updated as final/complete so no reporting to UMV               | Training documents and method of delivery being reviewed. Interim measure guidance newsletter |
| 16 | Request for SPEN to provide postcode extract   | Request being submitted to the business and update to be provided regarding availability      |
| 19 | Suggested improvement of Power cuts section of the website - suggested use of interactive map ( e.g. UKPN's Powercut ) | Feedback being provided to the relevant department for review.                                |
| A  | ICP search function within RAdAR for SPEN contact – hyperlink to information rather than searching for                 | All system changes being reviewed / update to be provided once complete                       |
| B  | Ability to copy over an application rather than a template   | All system changes being reviewed / update to be provided once complete                       |
| C  | Inspection and Monitoring levels available on RAdAR so ICP's are aware of own  | All system changes being reviewed / update to be provided once complete                       |
| D  | Self-approved design allows the ICP to complete construction/connection prior to the design being acknowledged         | All system changes being reviewed / update to be provided once complete                       |
| E  | New Wayleaves process – options need to be available in RAdAR  | All system changes being reviewed / update to be provided once complete                       |
| F  | On Request to Connect form-section to input jointers information   | All system changes being reviewed / update to be provided once complete                       |
| G  | CT/VT ratio documents for P283 – add to RAdAR as conditions precedent  | All system changes being reviewed / update to be provided once complete                       |

# G98/G99 Process

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Ken Brassington

# G98 & G99 Process

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- Proposals to Replace
  - G83 – G98
  - G59 – G99
- Legal Change - **Apply from 27 April 2019**
- New Engineering Recommendations G98 and G99
- Take account of EU Network Code: Requirements for Generators (RfG)
- Approved by Ofgem 16 May 2018
- Based on G83 and G59 but additional technical and significantly more documented compliance requirements.

# G98 & G99 Process

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- **Main Changes :-**
- EREC G98 Type Tested < 16A/phase
- EREC G99
- Revised Standard Application Form - **Generators can use them now (and probably should be in most cases) ENA Website :-**  
<http://www.energynetworks.org/electricity/engineering/distributed-generation/engineering-recommendation-g59.html>
- Revised DG Guides
- EREC G83 & G59 can be used up to 27 April 2019 - Will only be applicable to generation that has already been connected (unless contracts already let)

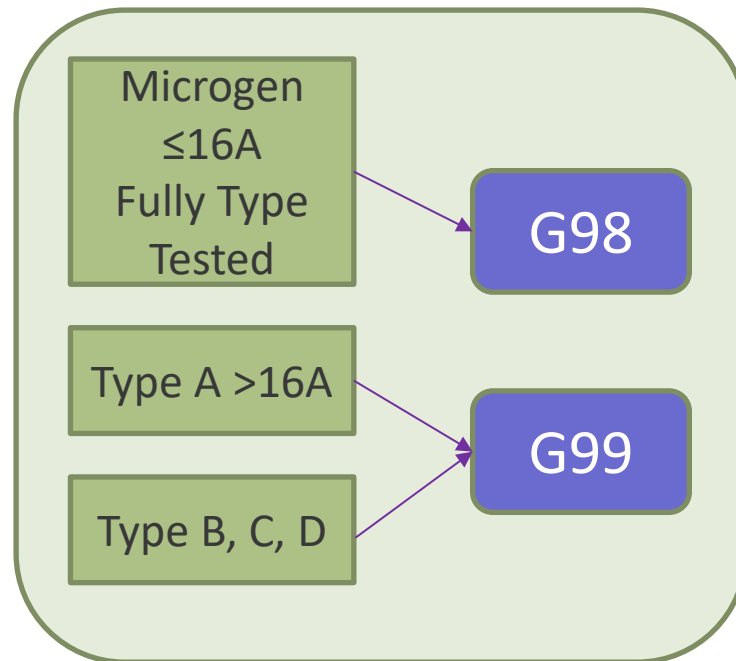
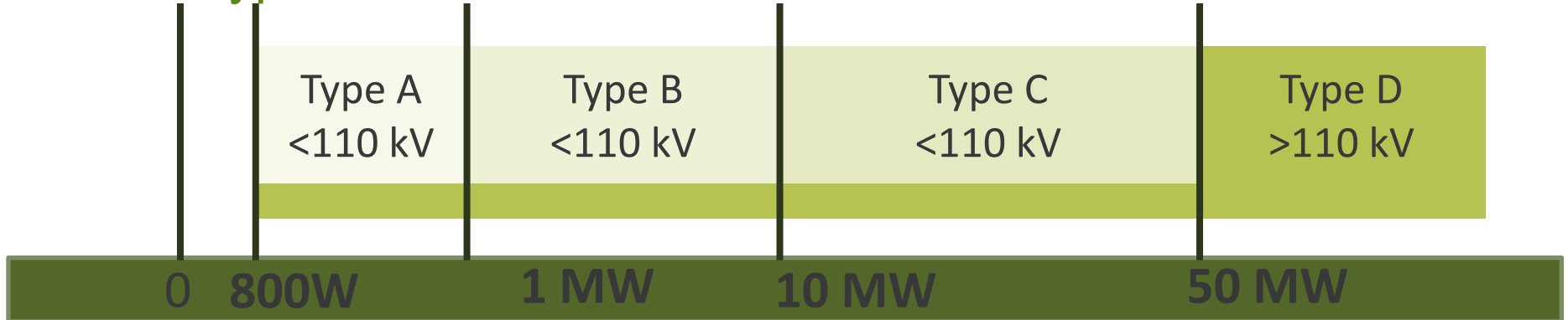
## G98 & G99 Process

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- G99 applies from 27 April 2019 unless Generator has a contract for the purchase of main generating plant that has been signed before 17 May 2018
  - Generator must notify the DNO by 17 November 2018
  - DNO to notify National Grid (not codified in G99)
  - If G99 does not apply, then G59 will apply
- Upper limit of type testing removed (50 kW), type testing of products (not just whole generating units)
- Demonstration of compliance – receiving product type tests, manufacturers' information and onsite test results
- Issuing Operational Notifications (EON, ION, FON, LON)
- Power Generating Module Document – iterative document throughout connection process

# G98 & G99 Process

## RfG Types - GB





# G98 & G99 Process

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- **Exceptions**
- Storage
  - In GB legislation storage is defined as generation
  - Not currently covered by RfG
  - Therefore not currently included in the Type definitions (A, B, C, D)
  - All the existing G83, G59 and Dcode requirements are applicable to storage – its just the new requirements coming from RfG that are excluded
- Emerging Technologies
- Short term paralleling
- < 800 W

# G98 & G99 Process

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## What will we see

- Adoption of ENA Standard Application forms G98 & G99
- **Need to Comply with G99 on Connections made from 27 April 2019**
- Review and Changes within Connection offers
- Review and Changes to SPEN Website
- **Iterative provision of documents throughout connection Process**
- Review and Amendments to Standard Connection Agreements
- **Provision of Post Acceptance of models and simulation results**
- **Increased Reference to ENA Type Test database**
- **Submission of Compliance Verification Form**
- **Agree Commissioning Program**
- **Submission of Installation Forms**
- Introduction of Operational Notifications ie (EON, ION, **FON**, LON)

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# Andy Churchman

# UK Government Road to Zero Strategy



## The Road to Zero

Next steps towards cleaner road transport and delivering our Industrial Strategy



## Zero Emission Vehicle Summit

Driving the change

**Birmingham**  
**Tuesday 11<sup>th</sup> September 2018**

### Launched a new Electric Vehicle Energy Task Force

- £106 million funding

### Objective of the Task Force

*To put engaging the electric vehicle user at the heart of preparing the electricity system for the mass take up of electric vehicles*

## Network Innovation funding bid for Strategic EV Master plan for SP Manweb area

### First Interview with Ofgem took place Wednesday 5<sup>th</sup> September

- Requested proof of activity on uptake of EV's in SPEN area
- Requested detail of any alternative funding sources for EV across SPM

### Second Interview – Tuesday 2<sup>nd</sup> October

- Detail agreed partnerships
- Provide evidence of the growth in this area
- Provide evidence of customer requirements for EV

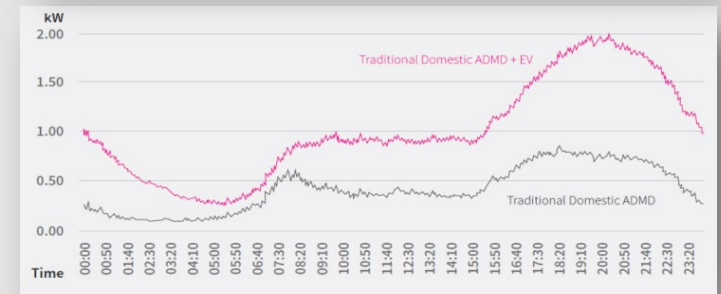
**Decision expected by end of November 2018**

**Project to start in January 2019 if successful**

## ADMD and Cable Sizes For EVs & LCTs

Our commitment – “Modify our ADMD guidance for new connections to account for EVs”

- SPEN have been working within our business to modify our key design principles.
- Gained approval and established working process to set agreed new levels.
- Design process approved using experts from within our EV working group, industry best practice and ENA-DNO input.
- Determined appropriate values for:
  - ADMD modified
  - Service Cable 25mm – 35mm
  - 95mm – 185mm
  - 185mm – 300mm
- Website to be updated by end of the month.



Given the ongoing and forecast uptake of low carbon technologies, the ADMD values have been upwardly revised to reflect the electrification of heat and transport, and to accommodate heat pump technology and domestic EVSE and EV charging equipment.

This is to ensure adequate supply capacity is provided at the time of construction and to avoid network security and supply issues arising from thermal overload and excessive volt-drop.

## Example ADMD Values for electrically heated homes

| Type of Heating Scheme                                 | H (kW)  | ADMD (kW)    |
|--|---|--------------|
| Water and Space Heating<br>(EPC* Rating A-C)           | Total heating load including water heating, storage and panel heaters | $0.5H + 2.0$ |
| Storage radiators / panel heaters<br>(EPC* Rating D-G) | Total heating load including water heating, storage and panel heaters | $0.6H + 2.0$ |
| Electric Central Heating Boilers                       | Total value of installed storage space-heating only                   | $H + 3.0$    |
| Heat Pump<br>(air/ground source)                       | Total installed Heat Pump capacity                                    | $H + 3.0$    |

\*EPC – Energy Performance Certificate; typically A-C for a new build property.



## Example ADMD Values for non-electrically heated homes

| Type of Heating   | Type of House   | Annual Consumption (kWh) | ADMD (kW) |
|---|---|--------------------------|-----------|
| Gas Hot Water and Central Heating and/or 3kW Immersion Heater | ≥ 5 Bedroom Property  | 5000                     | 2.0       |
|   | 3 Bedroom Detached property or 4 Bedroom property                 | 4250                     | 1.5       |
|   | 1 Bedroom / 2 Bedroom property or 3 Bedroom Non-Detached property | 3500                     | 1.0       |

## ADMD Modifier for Presence of EVSE/ EV Charging Equipment

If the home is to be built with EVSE or EV charge point equipment the modifications set out in Table 6 should be made to the ADMD for each property, per EVSE or EV charge point installation:

| LCT  | EVSE installation | EVSE Rating (kW) | ADMD Modifier per installation (kW) |
|--|-------------------|------------------|-------------------------------------|
| EVSE or EV charge point to be installed for domestic EV charging | Fast Charging     | 7.36 (32A)       | + 2.5                               |
|  | Slow Charging     | 3.68kW (16A)     | + 1.5                               |

The resultant ADMD should be rounded-up to the nearest 0.5 kW.

For example, a property with an EPC rating of D, 4.8 kW of installed panel heaters and a Fast Charging EVSE, will have a property specific ADMD of 7.5 kW:

$$0.6(4.8) + 2 + 2.5 = 7.38kW = 7.5kW$$

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Louise Taylor

# ICE Penalty Consultation Update

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Ofgem have confirmed SP Energy Networks have NO PENALTY for 2017/18

Further improvement highlighted:

- Wider engagement with UMS market segment

How do you think we should do this?

Is there an appetite for a UMS / LV Demand communication / engagement?

# 2019 Events

| Date                                 | Event                 |
|--------------------------------------|-----------------------|
| Wednesday 13 <sup>TH</sup> February  | ICP Workshop          |
| Wednesday 6 <sup>th</sup> March      | Stakeholder Panel     |
| Wednesday 20 <sup>th</sup> March     | Owner/ Operator Forum |
| Wednesday 10 <sup>th</sup> April     | DER Forum             |
| Wednesday 8 <sup>th</sup> May        | Demand Workshop       |
| Wednesday 19 <sup>th</sup> June      | Stakeholder Panel     |
| Wednesday 11 <sup>th</sup> September | Stakeholder Panel     |
| Wednesday 25 <sup>th</sup> September | ICP Workshop          |
| Wednesday 9 <sup>th</sup> October    | Owner/ Operator Forum |
| Wednesday 23 <sup>rd</sup> October   | DER Forum             |
| Wednesday 13 <sup>th</sup> November  | Demand Workshop       |
| Wednesday 11 <sup>th</sup> December  | Stakeholder Panel     |

# Actions Update

## Action 3 - Website

We will introduce a SP Energy Networks stakeholder event calendar providing details of all events.

We will also improve the information on the completion of our ICE Improvements by introducing a timeline of key activities linked to the relevant information.

## Action 4 – Metering Process

Develop an interactive tool for the metering process.

Endorsement from our Stakeholder Panel prior to implementation.

Draft process being refined internally.

Comments welcome from the Stakeholder Panel.

# Actions Update

## Action 6 - Project Management:

Establish templates and processes for smaller HV / LV projects. Enhance project management skills within our delivery teams. Review and enhance our account and project management offering.

Templates are now being used in all of our districts.  
Has anyone got experience on working with these? Does anyone have any comments?

## Action 9 - ICP/IDNO Interface:

Review our processes and systems to support the deliver of the code. Specifically, we will seek to enable greater level of self-service by our customers with the purpose of reducing the time taken to design & deliver projects. We will review best practice with our Stakeholders and other DNO's

We have created a Radar Working Group.  
An action plan has been created and will be presented at our ICP Workshop next week.

# Actions Update

## Action 10- Heatmaps:

Develop the next generation of heat maps to address the update of Low Carbon Technologies and will engage our stakeholders to understand exactly what their future requirements are.

Stakeholder Panel members were asked to complete a hand out where we have asked for comments and suggestions on how we can move forward with our heatmaps. We would like this feedback from all of you here today

Analysis has been carried out with all other DNOs heatmaps.

We are to use Survey Monkey to send out to all of our Stakeholder for them to complete.



# Actions Update

## Action 11- Queue Management:

Measure the impact of our queue management policy being applied to new and previously accepted projects. We demonstrated that capacity is being released when projects are identified as not progressing according to policy.

Piloted the new process in Central and Fife.

To date - 165MW capacity returned to the Grid

Upcoming - 260MW in the next few weeks.

Total by the end of October - 425MW.

If this is replicated across SPM and SPD it could mean 3 – 5 GW of capacity released across both of SPEN's Licence areas.

Workshop in October to train SPM staff and initiate process.

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# Andy Churchman