The Voice of the Networks

Energy Networks Association

Open Networks Project
Implementation of Project Outcomes
19th December 2019 Update

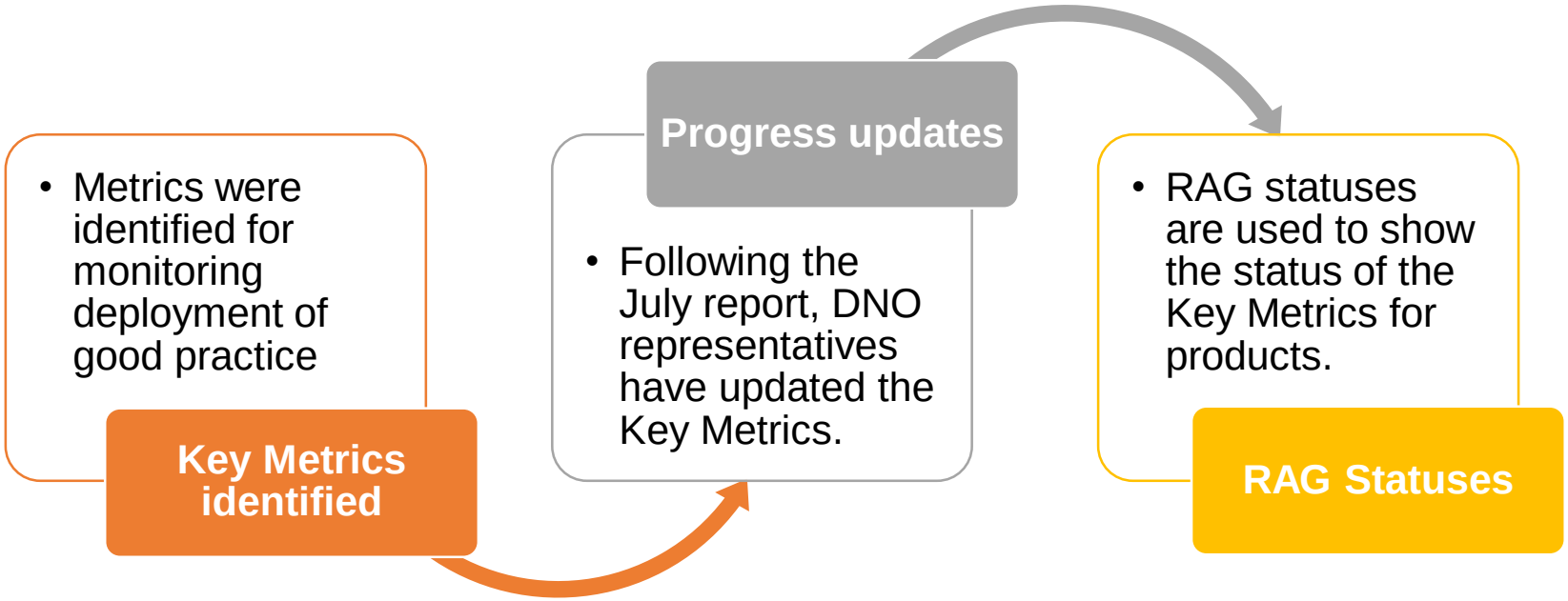
Implementation Update – December 2019

This report updates our first report published in July 2019 which showed how deliverables and outcomes from Open Networks had been implemented.

In summary:

- For 2018 products and outputs, implementation across the network companies has increased. Our “fully in place” metric has increased to 86%.
- Further 2019 product outputs include Whole System Investment Planning and Whole System FES
  - 2018 WS1B P1 Investment Planning – the NOA now uses regional data and a new process.
  - 2018 WS1 P5 – the 2019 GB FES has included improved regional data. From 2020, network companies’ FESs will use a common set of building blocks to represent scenarios.

Monitoring Implementation – Introduction and Process



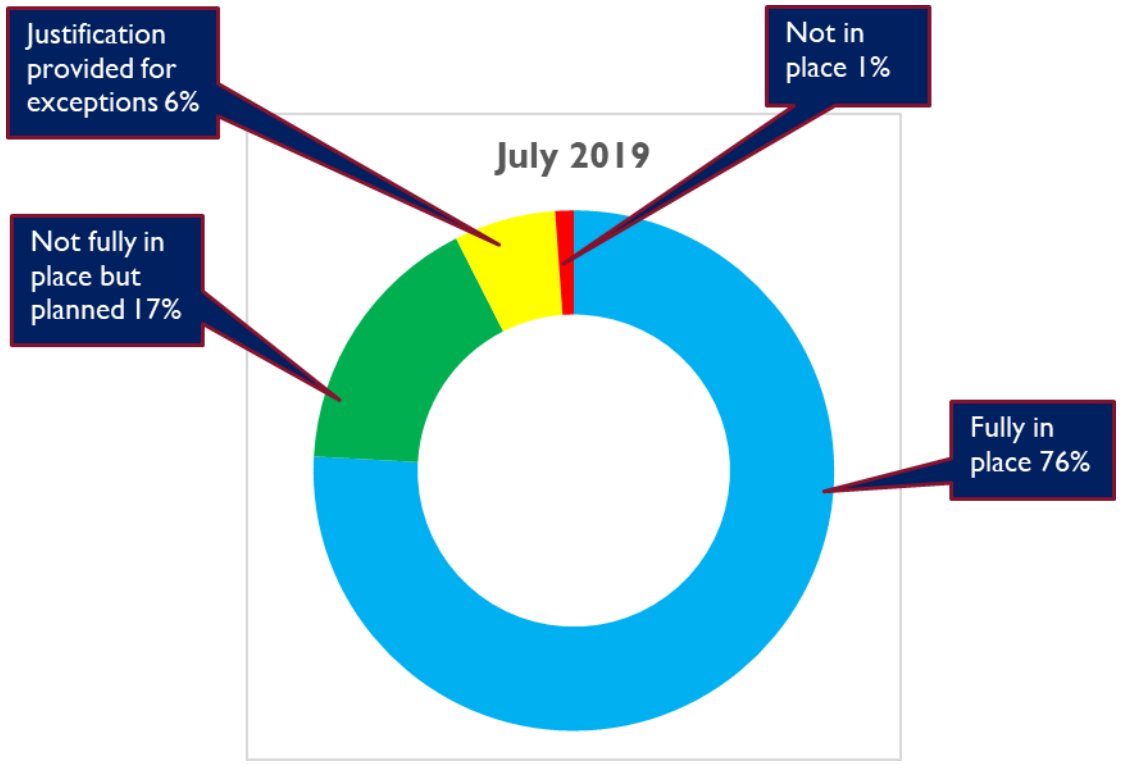
RAG Statuses:

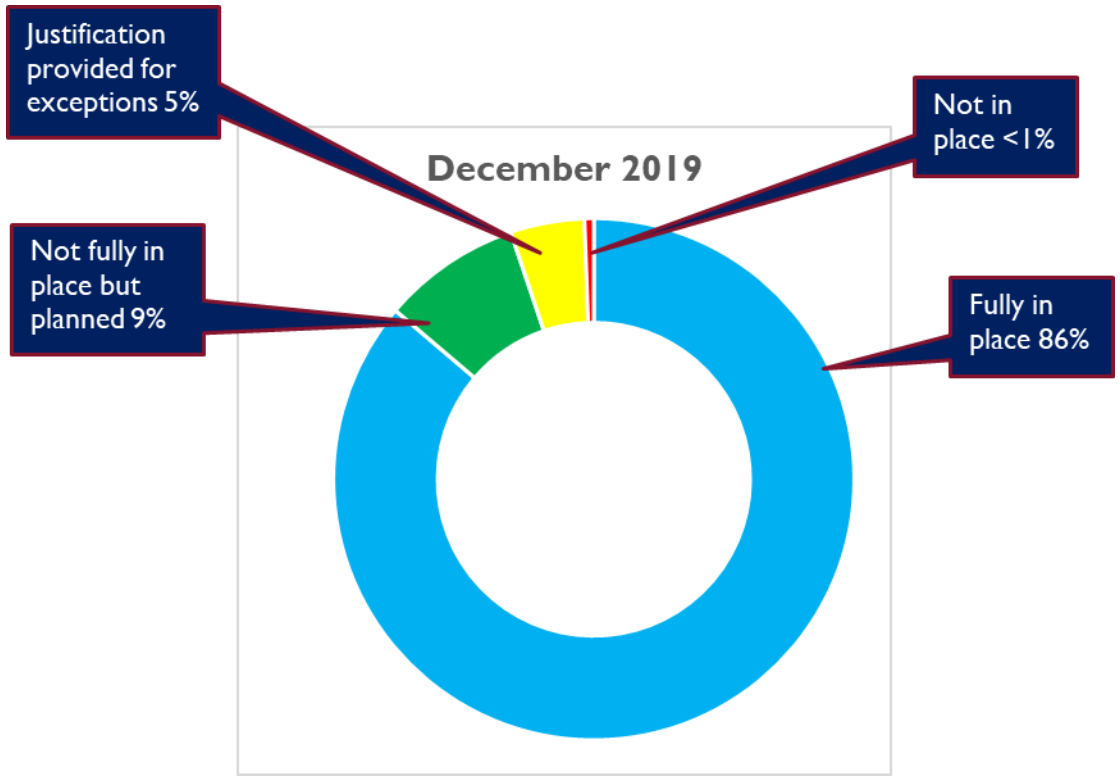
	Fully in place
	Not fully in place, but planned for full implementation
	Not fully in place, but justification for exceptions
	Not fully in place

The RAG statuses cover the following products:

- 2018 WS2 P1 (Good Practice ahead of Connection Applications)
- 2018 WS2 P4 (Information on Flexibility Services)
- 2018 WS2 P6 (Guidance on Post Connection Changes)
- 2018 WS2 P7 (Provision of Constraint Information)
- 2018 WS1 P7 (ANM Information)

Summary Position December 2019





This summary shows that in December 2019, 86% of the metrics are being met in total. This is up from 76%. More detailed positions for each product are shown in the following slides.

Good Practice ahead of Connection Applications 2018 WS2 P1 - December 2019 Position

Product	Good Practice ahead of Connection Applications (2018 WS2 P1)	
Metrics	Surgeries	Optioneering approach
	Provide a. pre-bookable surgeries and b. Also offer more bespoke meetings at a mutually convenient time and location to cater for all types of customers.	DNOs offer optioneering approach to allow customers to submit a number of different capacities (min of three per site) for the same site, receive budget costs and progress any one that is viable through a formal offer based on the original submission date.
Summary	All GB DNOs offer surgery on demand for be-spoke consultations. UKPN and WPD no longer offer pre-bookable surgeries based on feedback provided by customers.	All GB DNOs either offer this approach or are planning to implement it this year.
SSEN-D		**Updated [2]**
SPEN-D		
UKPN	**Note [1]**	**Updated [3]**
WPD	**Note [1]**	
NPG		
ENWL		
Notes	1 - UKPN and WPD offer bespoke meetings and were previously offering pre-bookable surgeries. Feedback from customers was that they preferred the bespoke meetings as they weren't getting the access they needed through the pre-bookable surgeries. Based on this feedback, UKPN and WPD only offer be-spoke meetings and continue to get positive feedback on connection surgeries. 2 - 'Tipping Point' Service - In addition to reviewing options, as part of its 'standard' design process SSEN will offer customers the option to reduce their capacity to the point at which reinforcement is triggered, where reinforcement is identified as part of the connection requirement. 3 - UKPN to include optioneering approach by end-February 2020.	

Fully in place

Not fully in place, but planned for full implementation

Not fully in place, but justification provided for exceptions

Not fully in place

Good Practice ahead of Connection Applications 2018 WS2 P1 (continued) – December 2019 Position

Product	Good Practice ahead of Connection Applications (2018 WS2 P1)						
Metrics	Heatmaps						
	Typically red/amber/green status should be available with a clear explanation of assumptions used for colour coding.	Quantification level of headroom provided.	Provide information for both demand and generation	Information provided down to HV busbars of primary substations with ability to select voltage level viewed.	Map information is refreshed at least monthly	Information available in geographically and in downloadable formats	Information should be based on connected and contracted generation and also takes account of formal connection offers.
SSEN-D		**Updated [1]**			**Updated [2]**		**Updated [3]**
SPEN-D		**Updated [4]**	**Updated [5]**		**Updated [6]**	**Updated [4]**	**Updated [7]**
UKPN		**Updated [8]**					
WPD							
NPG							
ENWL		**Updated [9]**					
Notes	1 - Headroom can be calculated with the information available on SSEN's heatmaps. The heatmaps include capacity, fault level, contracted generation and relevant transmission works.						
	2 - SSEN heatmap information is refreshed quarterly.						
	3 - SSEN heatmap data includes both connected and contracted demand and generation. SSEN does not include formal offers in heatmap data as we quote on contracted position – capacity is only allocated on contractual acceptance of a formal offer.						
	4 - SPEN aiming to complete in early 2020.						
	5 - SPEN provide demand and generation information though these cannot easily be switched between at present.						
	6 - SPEN heatmap information is refreshed quarterly.						
	7 - SPEN's heat maps do not take account of formal offers at this time, only the contracted position.						
	8 - UKPN to provide quantification of headroom by March 2020.						
	9 - ENWL now quantify the level of headroom.						

Fully in place

Not fully in place, but planned for full implementation

Not fully in place, but justification provided for exceptions

Not fully in place

Good Practice for Information Provision on Flexibility 2018 WS2 P4 – December 2019 Position

Product	Good Practice for Information Provision on Flexibility (2018 WS2 P4)				
Metrics	Share information on the drivers for the service/the network requirement including whether the needs are a short or long term requirement.	Share information on service requirements including: a. The characteristics required by assets to deliver the service (as described in 2018 WS1 P2) b. Minimum MW thresholds if applicable c. Locational requirements d. Specified service windows – whether requirements vary within the day, week, month, season etc.	Share information on procurement method including: a. Chosen method e.g. competitive tender vs fixed price b. Timeline for procurement exercise c. Assessment criteria for procurement exercise	Share information on payment approach, structure and possible contract lengths, including: a. Types of payments the provider can expect to receive for being on standby and delivering a service b. Whether the prices paid are set or can be specified by potential providers c. Behaviour that would constitute an Event of Default and the associated penalty	Communication a. Maps/graphical representations should be similar if not identical across networks? b. Depending on service type, flag visibility of services both at an early stage (~18 months) and in advance (~6 months). c. Offer one to one meetings to potential providers and allow for more detailed and tailored engagement. d. Set Service Level Agreements (SLA) for response time to queries.
Summary	DNOs provide this information through various channels (ITT, Roadmap, D FES etc.).	DNOs provide this information through various channels (Piclo, Website, tender documents, Roadmap etc.).	DNOs provide this information through various channels (Website, ITT, etc.)	DNOs provide this information or plan to provide this through various channels (Website, ITT, etc.)	DNOs provide this information via Piclo Flex and offer engagement for potential providers and have agreed Service Level Agreements in place.
SSEN-D				**Updated [3]**	
SPEN-D					
UKPN					
WPD					
NPG	**Updated [1]**	**Updated [2]**	**Updated [2]**	**Updated [2]**	
ENWL					
Notes	1 - Cost drivers NPG for the services NPG may look to procure were outlined in the DSO publications v1.0 and v1.1. 2 - This information will be published in November 2019. 3 - Pricing structure, payment approach, guidance, example contract, requirements, and an overview of products is available on the SSEN website - https://www.ssen.co.uk/FlexibleConnections/				

Fully in place

Not fully in place, but planned for full implementation

Not fully in place, but justification provided for exceptions

Not fully in place

Guidance on Post Connection Changes 2018 WS2 P6 – December 2019 Position

Product	Guidance on Post Connection Changes (2018 WS2 P6)		
Metrics	Website DNOs should seek to develop and provide clearer and consistent guidance to customers wishing to make changes to the equipment at their site/connection. DNO websites should have dedicated pages for customer wishing to modify their connection. These pages should provide reference to the legislative requirements, as well as links to relevant supporting documentation.	Applications Process DNOs should provide sufficient information and support to enable customers to determine whether or not they should request a new or modification application. DNOs should develop methodologies to allow customers to make a simplified application when seeking to make modifications to their existing connection. This could be by way of shorter more relevant application forms. Application forms and the application process should be amended to make requesting changes clearer and easier.	Connection Agreements Connection Agreements should ideally be reflective of the equipment installed and hours of operation of customers' equipment on the connected site where appropriate
Summary	A number of DNOs are planning to make changes to their websites to provide more clarity on connection changes based on good practice. Some DNOs have already improved their connections pages and they plan to continue making further improvements.	All DNOs follow the same process for new and modified connections and provide guidance to customers on requesting changes through a number of channels. Most DNOs are planning to make further changes to provide clarity.	Most DNO connection agreements for generation include equipment installed and hours of operation where applicable, however, not the same level of detail is provided for Demand connections in most cases.
SSEN-D			
SPEN-D	**Updated [1]**	**Updated [1]**	**Updated [1]**
UKPN	**Updated [2]**	**Updated [2]**	**Updated [2]**
WPD		**Note [3]**	
NPG			
ENWL			**Updated [4]**
Notes:	1 - SPEN have progrssed actions on its website, applications process and on connections agreements in the second half of 2019. 2 - UKPN has updated its website, applicaton process & agreements to better differentiate modified connections. 3 - WPD have developed a simplified application form and will issue this Q1 2020. 4 - ENWL now has a template connection agreement for timed connections.		

Fully in place

Not fully in place, but planned for full implementation

Not fully in place, but justification provided for exceptions

Not fully in place

Provision of Constraint Information 2018 WS2 P7 – December 2019 Position

Product	Provision of Constraint Information (2018 WS2 P7)		
Metrics	Pre-connection: Curtailment Assessment & Timescales a. DNO offers the choice of a minimum 2 of the below options, i.e. DNO Curtailment Assessment and at least one other. • DIY Assessment • DNO Curtailment Assessment • Curtailment Index b. DNOs make high level curtailment assessment information available early in the connection process. c. Depending on customer requirements, DNOs are flexible on timing of when they conduct the more detailed assessment and make curtailment information available.	Pre-connection: Flexible Connection Offers It is considered good practice for network companies to provide the following information in flexible connection offers: a. Explanation of the flexible solution being offered; b. Details of the constraint(s); c. An initial view of the curtailment; and d. Queue position (where relevant).	Post-connection: Notice of Upcoming Outages and Reporting of Actual Events It is considered good practice for network companies to: a. Provide advanced notice of outages with updates as appropriate; b. Provide final update in advance of the outage taking place; c. Establish fora at which connected customers are able to discuss operational issues; d. Provide to customers on request, a log of the outages that have impacted their connections. It is recommended that this information be supplemented (for ANM/flexible connections) with details of curtailment events.
Summary	All DNOs offer high level constraint information and offer varying levels of flexibility to customers on the timing of making curtailment information available. Some DNOs offer the options for both, DNO curtailment assessment and make data available for DIY assessment. Other DNOs plan to implement this as a result of the good practice guide.	All DNOs provide this information to customers.	All DNOs provide information to customers on upcoming outages and provide forums to discuss operational issues. Majority of DNOs offer a log of outages to customers upon request.
SSEN-D			
SPEN-D	**Updated [1]**		
UKPN			
WPD			
NPG			**Updated [2]**
ENWL			
Notes	1 - SPEN currently adopt the DNO Curtailment Assessment approach though a DIY approach is available on request. 2 – NPG is providing notice of outages and has established a Distributed Generation forum. Outage and curtailment information will be provided solong as the information is not commercially sensitive and complies with NPG's data protection policy.		

Fully in place

Not fully in place, but planned for full implementation

Not fully in place, but justification provided for exceptions

Not fully in place

Good Practice for Curtailment Process and ANM Reliability 2018 WS1 P7 – December 2019 Position

Product	Good Practice for Curtailment Process and ANM Reliability (2018 WS1 P7)					
Category	Curtailment Assessment					
Metrics	Calculation Principles Good Practice should be built on consistent, clear and open assumptions which allows for easy comparison between curtailment assessments.	Use of Half Hourly Analysis Both, load flow based and spreadsheet based, approaches are considered Good Practice depending on the complexity of the network. There are potential future options discussed below.	Demand Data Good Practice entails care when preparing demand data using the considerations below to ensure the most representative and accurate input data: a. should be made clear to the customer what data is being used (likely to be a future network configuration with historical or assumed data) b. all historical data is aligned in time, to ensure all macro affects are captured c. should be made clear to the customer that this demand data is subject to change which should make the curtailment better or worse.	Generation Profiles Good Practice is considered to use historical data to give the customer the most representative results, however using profile generation data is still a valid approach.	Principles of Access Good Practice includes detailed information of the generators ahead of them in the stack as detailed below: a. principles of access should be clearly stated in the offer and the curtailment assessment b. the customers understand who is ahead of them in the stack impacting their curtailment c. assumption of what type of generation is considered in the stack should be stated d. make type of generation and collective size of each type of generator ahead of customer in the stack clear n in the curtailment assessment	Key Outputs Good Practice should include all of the below in a curtailment assessment: a. Energy volume before curtailment (the assumed generation profile) b. Energy volume after curtailment c. And/or, the curtailed volume of energy d. Indication (probably visually) of the volume of curtailment throughout the year and throughout a day e. Indication of any abnormal running considered f. Outline of the assumptions in the previous sections in the supporting information
Summary	*Generally this is in place across DNOs.*	*Generally this is in place across DNOs with both load flow and spreadsheet based approaches being used as appropriate.*	*Generally this is in place across DNOs.*	*Historic generation profiles are widely used by DNOs.*	*Generally, DNOs have these principles in place and apply them.*	*Most DNO's provide these outputs.*
SSEN-D	Updated [1]	Updated [1]	Updated [1]			Updated [1]
SPEN-D					Note [3]	
UKPN						
WPD						
NPG						
ENWL		Note [2]			Note [4]	Note [5]
Notes	Generally the DNOs are meeting good practice though SSEN and ENWL use curtailment assessment processes that are different from the other DNOs.					
	1- SSEN currently provides raw data to developers to carry out their own constraint assessments such that these metrics are not fully in place. In October 2020 applicants will be able to purchase spreadsheet based curtailment assessment reports for specific flexible connections.					
	2- ENWL does not carry out half hour analysis in its approach to curtailment analysis.					
	3 - To be addressed by Queue Management best practice guide. In SPEN's case, it does not provide details of other generation in the stack due to confidentiality issues.					
	4 - ENWL have not issued stack information to customers at the moment because there is no ANM scheme in place that would require a stack. When the need arise. ENWL will provide the stack information.					
	5 - The ENWL process does not align with the good practice guide. ENWL publish curtailment targets by voltage level, these targets act as an indicator whether reinforcement on the network is required to maintain or improve that curtailment level. The targets are issued initially as generic numbers but are refined year on year based on actual curtailment to specific customers. ENWL have developed their curtailment prior to the good practice guide and believe that it fulfils the spirit of the requirement.					

Fully in place

Not fully in place, but planned for full implementation

Not fully in place, but justification provided for exceptions

Not fully in place

Good Practice for Curtailment Process and ANM Reliability 2018 WS1 P7 Continued – December 2019 Position

Product	**Good Practice for Curtailment Process and ANM Reliability (2018 WS1 P7)**		
Category	ANM Reliability		
Metrics	Curtailment In Good Practice, details of all curtailment actions should be logged with sufficient detail to enable identification of key cause(s).	Communications In Good Practice the length of time of a communications outage should be logged with which communication leg caused the issue.	System Integrity In Good Practice the central systems should be redundant and covered by detailed SLAs. In the event of a fault this should be logged, resolved and communicated effectively.
Summary	*Most DNOs have confirmed this capability.*	*All DNOs have confirmed this capability.*	*Most DNOs have central system redundancy in place*
SSEN-D			
SPEN-D			**Note [2]**
UKPN			
WPD			
NPG	**Note [1]**		**Updated [3]**
ENWL			
Notes	1 - NPG will be adopting this going forward however have no plans to retrospectively apply this to older schemes. NPG have not had any requests to do so from existing customer however they would be happy to discuss any customer revised requirements should they arise.		
	2 - SPEN's existing central systems (non-ANM) have full redundancy and are covered by SLAs. SPEN are currently developing central management systems for ANM across their 2 networks areas which, when in place (Q3 2020) will also have full central system redundancy and will be covered by SLAs.		
	3 - NPG's modern ANM scheme has dual redundant central controllers with dual redundant power supplies. NPG also have redundancy in the communications channels from the central controllers to our network management system. Fault logging and resolution timescales for system component failures are currently being developed and will be implemented during 2019. This remains on target and NPG are developing a service level agreement with its Driffield ANM provider.		

Fully in place

Not fully in place, but planned for full implementation

Not fully in place, but justification provided for exceptions

Not fully in place

DNO Connections Options & DSO Product Definitions

Product	DNO Connections Options & Summary Tables (WS2 2017)
Summary	*This document was originally published with the intention to provide guidance to customers on the range of connection options available to customers and the level of security, cost and availability these connection types would provide. All DNOs engage with customers to understand their specific requirements and offer bespoke connections as required. WPD & UKPN have referenced this document on their website for customers as guidance.*

Product	DSO Product Definitions for Active Power (2018 WS1 P2)
Summary	*All DNOs procuring services are utilising the active power product definitions developed by ONP. Following further work by WS1A, DNOs have now standardised the branding and titles for all of the services.*

Fully in place

Not fully in place, but planned for full implementation this year

Not fully in place, but justification provided for exceptions

Not fully in place

* Will include in 2019 – 2020 ICE