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21 September 2015

Dear Aris

Notice of proposal to direct modifications to the Common Network Asset Indices Methodology under Part C of SLC 51

Thank you for the opportunity to respond to the above consultation. This letter should be treated as a consolidated response on behalf of UK Power Networks' three licensed distribution businesses: Eastern Power Networks plc, London Power Networks plc, and South Eastern Power Networks plc. The content of our response is not confidential and can be published on the Ofgem website.

UK Power Networks' asset risk management approach (known as ARP) is the industry leading implementation of condition based asset risk management. We believe that the proposed Common Network Asset Indices Methodology is a positive further development. We are in general agreement with Ofgem's initial findings and conclusion but would like to note the following:

- Our experience of implementing our own ARP approach supports the need for a validation exercise that verifies the output of the model against existing models and condition information. We do not expect the answers to be the same as those produced by our existing models but we must ensure that the outcomes are credible.
- A degree of flexibility in defining asset condition parameters is considered necessary in order to define a common framework which is both reasonably practicable to implement for all DNOs and provides comparable results. While we will seek to further define terms such as "Normal Wear" in the next revision where this is required, we believe that each DNO should specify this within their own application documents as they have different practices and data they collect for different assets. The Common Network Asset Indices must strike a balance between ensuring sufficient clarity to ensure reporting is consistent whilst allowing the development of asset management approaches by DNOs.
- We believe that the way in which failure consequences have been calculated considers the interdependence between assets, including a factor for co-incident failure. For example, the Network Performance Consequence of Failure for EHV and 132kV Assets (i.e. N-1 Assets) takes account of the "Probability of a coincident fault per hr", which has been agreed by all DNOs. In addition, the impact of the failure of one asset on the propensity of another asset to fail is implicitly included in observable failure rate and hence the agreed PoF parameters (K-Factor).
- The methodology creates comparable risk parameters for all reportable assets and describes how the Network Assets Workbooks should be populated. The methodology for translating this into the asset risk output value is set out in the Regulatory Instructions and

Guidance and is coded into the reporting workbooks. We consider that this is the correct approach and that duplicating this is not necessary.

We have included in the appendix a response to each of the points Ofgem raised in the attachment to this letter.

In respect of the draft direction, we propose the following amendments:

- In the final sentence of paragraph 5 the licence condition number (51) is missing
- In paragraph 10, "extend" should be "extent"

If any part of our response requires further explanation or clarification, please do not hesitate to contact me.

Yours sincerely

Keith Hutton
Head of Regulation
UK Power Networks

Copy: Richard Wakelen, Head of Asset Strategy & Performance, UK Power Networks
        Rob Friel, Regulatory Strategy & Optimisation Manager, UK Power Networks
        Paul Measday, Regulatory Returns & Compliance Manager, UK Power Networks
        Chris Watts, Ofgem

Appendix

Assessment of the DNOs submitted methodology against Ofgem's criteria		UKPN Response
Health Assessment		
Is capable of providing a degree of consistency in results to make meaningful comparisons across DNOs possible	The methodology is well structured and leads the assessment of health through a defined process which is built upon earlier health reporting. Care will be required during the operation of the methodology to ensure consistency is maintained via consistent application of assessments within the methodology: The use of terms such as "Normal wear", "Some deterioration" "Substantial Deterioration" and many other classifications within the Calibration – Probability of Failure appendix B, have a degree of subjectivity.	We believe that a degree of openness in the definitions is necessary, due to variations in the way that different DNOs collect and store Measured and Observed Condition Data. An example of a data storage variation is where, for a given condition observation, one DNO may record a result using a 1 - 4 scale, whereas another DNO may use a 1 - 5 scale and another simply store a Yes/No result. In terms of data collection, one DNO may have collected Condition Information which exactly matches a Condition Input Table in the Common AIM, whereas another DNO may use one or more pieces of Condition Information and/or Defects Records in order to map an asset to one of the bands in a Common AIM Condition Input table. We think it appropriate that the above treatment of DNO specific data should be captured in that DNO's individual AIM document, with slightly subjective/flexible definitions being captured within the Common AIM. This approach will allow DNOs' individual AIMs to evolve along with their data collection policies, without the need for all DNOs to agree changes to the Common AIM.
Uses objective and relevant inputs and provides a linkage to Probability of Failure (POF)/Failure rates	This criterion appears well met (not based on an engineering assessment but on the peer review by the members of the working group).	Agreed.
Enables continuous improvement and refinement through calibration against observable data (where appropriate)	The methodology provides an excellent basis for this criterion. Need to ensure innovations in operational and maintenance can be assimilated	Agreed, the process for future methodology changes should be defined in the next draft.
Criticality Assessment		
Assimilates Safety, Environment, Network Performance and Financial consequences into a single, monetised assessment of consequence of failure	Criteria fully met.	Agreed.
Is capable of providing consistent results	By the use published reference tables within the methodology which are developed from management accounts data sources across the companies.	Agreed.
Uses objective and relevant inputs	This criterion appears well met (not based on an engineering assessment but on the peer review by the members of the working group).	Agreed.

Takes into account the interdependence of network assets	It is unclear as little detailed commentary refers to the issue. It could be made more visible through specific examples.	We believe that the interdependence between assets is captured in the observable failure rates and the consequences. For example, the reference network performance Consequence of Failure for EHV and 132kV assets takes account of the "Probability of a coincident fault per hr". This probability has been agreed between all DNOs for all reportable EHV and 132kV Asset Categories. We believe that this is the appropriate level at which to consider asset inter-dependency for the purposes of the Common AIM.
Is capable of providing sufficient consistency to make meaningful comparisons across DNOs possible	Without doubt there will be errors introduced by the banding and averaging elements of critically into four bands per asset type. However, there is no evidence to suggest that the output will not meet the requirements of this condition and any banding errors thus introduced would not get in the way of cross DNO comparisons.	While a higher number of bands would give improved resolution and a more accurate result, we agree that a four-band approach is appropriate for reporting purposes.
Enables continuous improvement and refinement through calibration against observable data (where appropriate)	The methodology provides an excellent basis for this criterion.	Agreed.
Monetised Risk Calculation		
The calculated value is proportional to expected values	The development of the methodology has this criterion at its heart and provided the validation of the inputs is carried out it is expected it would meet this requirement.	Agreed.
Is subject to a "validation" test against anticipated risk across the network	This validation is considered embedded within the methodology. However, we consider that is important to have an initial validation and calibration exercise and parameters refined before the methodology is finalised.	Agreed.
Has the ability to aggregate individual asset risk results to calculate the total network risk	Inherently the methodology has this ability although it has little detailed commentary regarding the application of this ability and how it is expected to feed into the regulatory process.	The methodology describes how the Health Index and Criticality Index will be calculated in a common way for all reportable assets, how the 5 x 4 HI/CI matrices showing the number of assets which fall into this band for each category will be reported, along with the limits of HI/CI bands. This gives Ofgem the information required in order to calculate the network risk for each category. The methodology does not explicitly state how this calculation will be carried out as we believe this should be included in the appropriate Regulatory Instructions and Guidance.
Enables continuous improvement and refinement through calibration against observable data (where appropriate).	The methodology provides an excellent basis for this criterion.	Agreed.