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Dear Mark

Consultation on Electricity Distribution Use of System Charging Modification Proposals: Central Networks and United Utilities – Reactive Power Charges

I welcome Ofgem's continued support of the application of excess reactive power charges on network users to encourage the efficient development and use of the distribution network.

Although this consultation relates to a modification proposal raised by United Utilities, Ofgem seeks views on a series of questions relating to reactive power charging and charges in general within the consultation letter. The aim of this letter is to provide responses to the questions raised by Ofgem within the consultation and not to add further to the details within the modification proposal already submitted.

I have attached, as an appendix, responses to the questions raised within the consultation letter.

Please do not hesitate to contact me should you have any queries or comments on any aspect of this letter.

Yours sincerely,

Simon M Brooke

Digitally signed by Simon M Brooke
DN: CN = Simon M Brooke, C = GB, O = United Utilities, OU = United Utilities North West
Reason: I am the author of this document
Date: 2006.01.16 10:54:46 Z

Simon Brooke
Structure of Charges Project Manager

Appendix 1

In response to your specific questions on page 4 of the consultation letter I have the following comments.

Are the proposed modifications to the charging methodologies for excess reactive charges more cost reflective considering also that the approaches being proposed are different?

The proposed modifications submitted by Central Networks and United Utilities should each be considered on their individual merits. A modification is submitted in order to propose a change that better achieves the relevant objectives, and should therefore be considered against the baseline of the current detail within each licensee's individual approved use of system charging methodology. The desire to be cost reflective is only one element of the relevant objectives, albeit an important one, and a modification should not be judged on cost reflectivity alone. A balance must be struck on the extent to which a change moves towards the achievement of the relevant objectives. Although you are right to note the differences between the two approaches, they do use consistent principles to underpin their methodology for reactive power charging. Where they differ is in the nature of the simplifying assumptions that are used to present a complex cost message in charges that can be passed on to customers. This does not mean that one modification is better than the other. Each modification proposal should be considered on its own merits and against the baseline of current practice in that licensee.

As noted in Annex 1, there are different approaches by the DNOs to reactive charging – are these justified?

At any given time it will not be surprising to see that licensees have different approaches to elements of charging. If this were not the case, there could be no innovation. However, we would expect there to be some convergence over time towards particular pricing structures, but there may also be good reasons why companies' have different enduring approaches to charging, reflecting both the nature of their own costs and perhaps their measurement capabilities.

Both the proposals appear to establish what the incremental cost of extending the network peak may be at different power factors. It is not clear how these costs also relate to the existing capacity charge (kVA) which all DNOs levy in some form or another on larger users (normally HH metered). Does the capacity charge already reflect an element of additional costs?

United Utilities, like most distribution businesses, levy availability charges (defined as £/kVA/month) on those customers that require the provision of available network capacity. The available network capacity is defined as the Authorised Supply Capacity, which is formally agreed with the customer (at the outset of the connection and for any ongoing

revisions) and is enshrined in its connection agreement. The formulation of the availability charge from the Distribution Reinforcement Model (commonly known as the 500MW model) takes into consideration the costs for the following network levels: (1) 100% of the voltage of connection, (2) 100% of the next transformation level, and (3) 20% of the next voltage level. The remaining network costs caused by the network user are recovered in the unit rate(s). The network model on which these network costs are defined is constructed assuming the delivery of energy and demand at a power factor of 0.95. It is when the power factor is outside 0.95 that the network user starts causing additional network costs that are not recovered through the standard charges. It is only these additional network costs that are reflected in our proposed reactive power charges.

Poor power factor may increase costs on the network at times other than peak, which may lead to increased network losses. The methods proposed by the DNOs indicate that these charges do not reflect the cost of the network loss for instance – should they?

United Utilities recognises that poor power factor may in turn lead to increased network losses. The resultant costs fall on suppliers through loss adjustment of settlements data, either via loss adjustment factors or the correction factors that make settlement balance. We have not felt it appropriate to build wholesale energy cost into use of system charges. However it is not practicable to tailor loss adjustment factors to reflect individual customer circumstances apart from a small number of very large sites.

Is there justification for levying (or not levying) excess reactive charges on distributed generation?

In our view, it is equally necessary to charge generators for the effects of poor power factor. As described above our standard charges are derived from a model that assumes power factor no worse than 0.95. A generator operating outside this range is also likely to add to our network costs, unless special provisions have already been made. In the future, more of a market may be made in 'ancillary services', which could encourage a wider range of commercial options being available to some generators and other customers.