

Our ref. Your ref.

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Dear Mr Chow

# Electricity distribution charging boundary between higher (EDCM) and lower (CDCM) voltages - Impact Assessment

CE Electric UK Funding Company (CE) is the UK parent company of Northern Electric Distribution Ltd (NEDL) and Yorkshire Electricity Distribution plc (YEDL). We welcome the opportunity to respond to your consultation on the extra-high-voltage (EHV) boundary and are please to inform you that as a result of our EDCM customer workshop on 5 July 2010 we have been able to capture some specific customer concerns that were expressed at that meeting.

Given the timing of the workshop this response consists of our own observations, including further thinking on existing issues and customer feedback that may affect Ofgem's previous thinking. We have also included observations and suggestions relating to the impact on the calculation and application of line loss factors resulting from any change in the boundary.

We recommend that any change to the boundary is delayed by at least 12 months in order to give customers the opportunity to fully understand and absorb the impact; and so that any changes to the balancing and settlements code (BSCP 128) requirements for the calculation and publishing of line loss factors can be addressed. Our supporting logic for this delay is set out below.

#### Disturbance

Existing customers do not welcome disturbance unless it results in a combination of reduced charges and forward stability or predictability of future charges, particularly in such a sensitive economic climate. Specifically customers potentially moving from site specific charging to the CDCM, which was implemented on 1 April 2010, have a number of concerns, including:

- Facing higher costs, including those due to the CDCM pence per unit cost signals;
- Some customers potentially moving from current site-specific terms to the CDCM did not provide input to or considered the implications of the CDCM prior to implementation as they were not affected by it;
- Customer's budgets and business models are already set for 2011 and any adverse change at 1 April 2011 is a significant concern; and
- Future potential instability caused by changes through open governance.

This latter concern regarding potential instability and lack of predictability was expressed by a number of customers at the workshop and not just those potentially affected by the boundary change. Customers can see the cost implications of moving to the CDCM in the future and five of the affected customers who attended our workshop do not welcome the prospect of moving to the CDCM.

In addition to changes in charges it is important to note that any customer moving from site-specific EDCM to average CDCM would also see a change in their losses treatment as line loss factors would change from site-specific to generic HV losses (and vice-versa).

We propose a delay to the implementation of any boundary change so that customers potentially affected can fully understand the financial implications of both the CDCM and EDCM and address their budgets accordingly.

# Electrical connectivity and asset sharing

It should be borne in mind that site-specific customers metered at high voltage (HV) are unlike the majority of HV customer connections metered at primary substations, specifically:

- The capacity used by the customer is sourced exclusively from the EHV network for engineering reasons as a result of design decisions at the time of the connection;
- The metering is at HV rather that EHV for financial and engineering simplicity as EHV metering connections are more complex and costly;
- These customers have a point of electrical common coupling with other customers at EHV not HV and the wider network does not utilise the dedicated EHV assets to source capacity, so these customers do not share dedicated EHV assets with HV customers;
- EHV to HV transformers are dedicated to them rather than shared with other users of the EHV network, so they do not share their HV connection assets with other customers; and
- Even where the minority of such customers have HV back-up supplies they do not use the HV network to source their agreed normal capacity and this back-up supply would be charged for on a normal HV tariff;

We currently have 10 customer premises in the NEDL area that are classed as EHV sites and charged on a site specific basis, but metered at HV, we have previously provided Ofgem with an impact assessment for these customers based on the latest version of the EDCM model. These include two – 132/11kV customers, seven - 66/11kV customers and one 33/11kV customer. This is a legacy position and results from the connection policy that was in place at the time of these connections.

The indicative use of system charges provided in the consultation show significant increases for these customers should they be moved to the CDCM and be given an average charge based on the current HV network tariff. The estimated income recovered for these 10 customers is currently  $\pounds$ 1.8m moving to  $\pounds$ 5.5m under the CDCM HV network tariff.

We have treated these customers as site-specific customers as they utilise dedicated EHV assets and the metering is at HV for engineering convenience purposes and probably as a result of the higher overall cost that would have been involved at the time of the connection had EHV metering been installed. In the case of 132/11kV and 66/11kV we have looked at the possibility of customers retrospectively fitting metering at the higher voltage; this would not be possible in all circumstances and also has the following limiting factors:

- The cost of the metering for a double circuit connection could be in the region of £100k;
- The space in the existing substation compound may not be available, with an estimated requirement of circa 20m<sup>2</sup>; and

• The customer would have to face these connection modification costs.

If these customers do not electrically share the HV network it is reasonable that Ofgem and DNOs would need to be absolutely clear why such customers should share the cost of the HV network in charges set for them. Such customers, metered for convenience at HV, do not benefit from the interconnection of the HV network and therefore it seems inequitable that they should pay for a share of these assets on the same basis as those who utilise the HV network.

If such customer's connection arrangements for sourcing capacity are the same as EHV customers, i.e. dedicated EHV assets, it is cost-reflective to treat them in the EHV group. It is possible to leave these customers undisturbed by constructing a definition based on how they are connected to the source of their capacity rather than a potentially over-simplistic definition based on metering voltage. Given that there are only around 34 customers across the county in this situation, we prefer the no change option, with a view to addressing any inconsistencies over time.

# Moving the boundary down

In moving the EHV charging boundary down the impact on the CDCM needs to be taken into consideration. The impact on most customers from April 2010 has already been significant with most HV customers seeing significantly increased prices. We believe a period of stability is appropriate for these customers over the coming year to allow the full impact of the CDCM to be analysed.

Any changes to the boundary will have a knock on effect on line loss factor (LLF) production and publication under BSCP 128. If the boundary is moved down such that more HV customers require site-specific charges there are a number of issues that will require addressing, including;

- If site-specific tariffs are applied the current trading arrangements require that site-specific line loss factor classes (LLFCs) and site-specific LLFs are used; and
- The deadline for submitting new LLFs for implementation on I April 2011 is 30 September 2010, which leaves insufficient time to calculate site-specific losses for multiple additional sites; and
- BSCP 128 requires that site-specific LLFs are applied to sites that are connected at EHV; or to other sites where the customer has requested a site-specific LLF, and the DNO is in agreement. This principle may prevent the moving of customers across the boundary en-mass or unilaterally.

One possible option to consider is the de-linking of site-specific charges from site-specific losses for certain customers, however this would need to be explored with suppliers and the BSC. Our suggestion is that it may be possible to apply a site-specific charge and a site-specific LLFC, but then apply generic HV LLFs.

Changes may be required to the BSC to accommodate a change in the boundary and an implementation delay may be necessary in order to map the BSC to the boundary change.

We are not in favour of options that significantly increase the number of site-specific customers due to potential instability effects on models, avoiding disturbance to customers and the undoubted increase in administration costs.

We note Ofgem's key question with option 5a - lowered boundary 2 on whether a charging boundary dividing line between 66/11kV and 33/11kV substations is appropriate and that you seek views on this. We believe it may be better to have a dividing line between those HV metered customers connected via dedicated substations and those that are not.

#### LLFC and administration costs

We believe there are potential issues with the number of LLFCs that would be required if the boundary were to move down and the associated costs of managing site-specific charges and

losses calculations for a significantly increased number of customers are a concern to us.

# **Customer choice**

We do not believe that customers should be given a choice on which charging methodology they should be priced under, as this is likely to drive further inconsistencies. However, consideration should be given to an exception in the case of the legacy customers on a one-time only basis once the EDCM methodology has been finalised and the true impact on these customers is known. This is because in reality the connection voltage is determined at the time of connection and the boundary that is in place at that time determines what the customer should pay for use of system going forward.

# Customers with HV metering at primary substations

We are becoming increasingly uncomfortable with the differentiation of HV metered customers connected to 132 or 66kV/11kV substations and HV metered customers connected to 33kV/11kV substations. It may be better if a clear distinction is developed between customers metered at HV on dedicated primary substations and those customers metered at HV on shared primary substations, where the former would be treated as site-specific and latter would HV substation tariffs (HV sub) applied irrespective of primary substation voltage. This would differentiate HV metered customers connected to dedicated EHV assets from HV customers connected to shared network primary substations.

# Evaluation of the options

The table below includes additional observations on the proposed options including merits and potential pitfalls.

Option	Observation
Option1 - No change (NC)	This is broadly acceptable but creates a differentiation by connection date for HV metered customers on dedicated EHV
	assets.
Option 2 – Raised Boundary (RB)	This option creates significant disturbance for some customers both on charges and losses (LLFs) and should be avoided.
Option 3 – Optional raised	We do not believe that customers should be given a choice on
boundary (ORB)	is likely to drive further inconsistencies
Option 4 – Lowered boundary	This option creates significant disturbance for customers both on charges and losses (LLEs) and significant increases in
	administration of additional site-specific customers and should be
	avoided.
Option 5 – No change 2 (NC2)	This is broadly acceptable and more consistent than option 1. However would propose clarifying the application of this to those class B customers only if they are connected to dedicated EHV assets and irrespective of primary voltage, but excluding B3 customers
Option 5a – Lowered	This option creates significant disturbance for customers both on
boundary 2	charges and losses (LLFs) and significant increases in
-	administration of additional site-specific customers and should be
	avoided.
Option 6 – Authorised	This option may unacceptable disturbance for customers who
capacity	increased or reduced their authorised capacity within the
	electrical capacity of their connection if it caused them to move
	between methodologies from one year to the next.

# CE's preferred option

Having considered the impact on existing customers, charging principles, administration costs, suppliers and the BSC we are in favour of no change. We prefer a subtle variant of option 5 that

restricts site-specific terms to customers connected to dedicated EHV assets, irrespective of the metering voltage or the primary voltage of the dedicated substation. This variant would mean that HV customers metered at primary substations that are shared by other HV and LV customers would be charged under the CDCM.

We hope you find our observations and suggestions useful and naturally we are happy to provide any further clarification you may seek.

Yours sincerely

Harvey Jenes

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