CE Electric UK

Modification Proposal

Modification number: 0003/2006 – Treatment of EHV dedicated assets

Clarification of the EHV asset valuation for dedicated assets subsequently replaced by CE (section 4.2.1) and the OR&M calculation for dedicated assets (section 4.2.3) of the Use of System Charging Methodology for both NEDL & YEDL.

Date Submitted: 30 October 2006	**Version number: 1.7**
Date Approved:	**Date Rejected:**

Implementation Date: 1 April 2007

Details of Proposal:

CE Electric UK proposes to clarify section 4.2.1 and 4.2.3 of the existing UoS methodology, for calculating site-specific EHV demand charges. This change will apply to both Yorkshire Electricity Distribution plc (YEDL) and Northern Electric Distribution Ltd (NEDL). We are not introducing anything new in the approach used to calculate EHV charges. The change is purely to provide greater transparency and clarification in the methodology statement of our current approach to the EHV asset valuation and OR&M charges - in particular the application for of the asset valuation calculation for dedicated assets that have subsequently been replaced by CE and the calculation of OR&M charges for dedicated assets.

Change-tracked copies of relevant parts of our methodology statement are attached in appendices 1 and 2. As stated above we believe it provides more detail and greater transparency for the calculation of the asset valuation and OR&M charges.

Description of the changes:

Asset valuation – [section 4.2.1]

Our existing methodology states that the asset valuation does not apply to sole-use assets - under our new proposal this statement has been removed. At the time of connection dedicated, or sole-use, assets would normally be paid for by the customer, so that to include them in the calculation of demand EHV UoS charges would introduce an element of double counting. However, at the end of their asset lives, or if they are in poor condition, these assets will typically be replaced at CE's expense and as such need to be captured in the UoS charge.

In addition this section of our statement only shows a single equation for the asset valuation calculation, which assumes that the assets are shared with other customers. However, to provide greater clarity of our treatment of the dedicated or sole-use assets in the asset valuation a second equation is required.

Hence, we have introduced a second (new) equation which applies when the dedicated or sole-use assets (i.e. not shared with other customers) have been paid for by CE UK. In this circumstance the costs are attributed based on the proportion of the agreed capacities for demand and generation:

- For the typical demand-only sites the proportion will be 100%.

  (e.g. if a dedicated asset were used to provide a demand agreed capacity of 6MVA and no generation capacity, the proportion would be 6/(6+0) = 100% allocated to demand); and

- For the less typical sites with both demand and generation the proportion will be a value less than 100% - where this situation occurs our policy remains that the fairest and most transparent allocation of the costs between both parties (demand and generation) is on the basis of the capacity they have agreed and reserved.

  (e.g. if a dedicated asset were used to provide a demand agreed capacity of 6MVA and a generation agreed capacity of 36MVA, the proportion would be 6/(6+36) = 14.3% allocated to demand).

Operational repair and maintenance (OR&M) – [section 4.2.3]

Our existing methodology statement only shows a single equation for the OR&M calculation, which assumes that the assets are shared with other customers. However, to provide greater clarity of our treatment of dedicated or sole-use assets in the OR&M calculation a second equation is required.

Hence, we have again introduced a second (new) equation which applies to the dedicated or sole-use assets (i.e. not shared with other customers). In this circumstance the costs are attributed based on the proportion of the agreed capacities for demand and generation:

- For the typical demand only sites the proportion will be 100%.

  (e.g. if a dedicated asset were used to provide a demand agreed capacity of 6MVA and no generation capacity, the proportion would be 6/(6+0) = 100% allocated to demand); and

- For the less typical sites with both demand and generation the proportion will be a value less than 100% - where this situation occurs our policy remains that the fairest and most transparent allocation of the costs between both parties (demand and generation) is on the basis of the capacity they have agreed and reserved.

  (e.g. if a dedicated asset were used to provide a demand agreed capacity of 6MVA and a generation agreed capacity of 36MVA, the proportion would be 6/(6+36) = 14.3% allocated to demand)

Please note we are not changing the method by which our model functions, this change is about providing further clarity so that our customers can better understand how their charges are calculated.

It should also be noted that there are no consequential impacts on the charges to current EHV customers or other industry documents and no adverse effect on competition.

Licence objectives:

The use of system charging methodology has the following objectives set out in standard licence condition 4:

(a) that compliance with the use of system charging methodology facilitates the discharge by the licensee of the obligations imposed on it under the Act and by the licence;

(b) that compliance with the use of system charging methodology facilitates competition in the generation and supply of electricity, and does not restrict, distort, or prevent competition in the transmission or distribution of electricity;

(c) that compliance with the use of system charging methodology results in charges which reflect, as far as reasonably practicable, the costs incurred by the licensee in its distribution business; and

(d) that, so far as is consistent with sub-paragraphs (a), (b) and (c), the use of system charging methodology, as far as is reasonably practicable, properly takes account of developments in the licensee's distribution business.

Why the proposal better meets the objectives:
Having reviewed our methodology we believe the proposed change better meets the objective set out in standard licence condition 4, in particular section (c) above, as it provides a fair attribution of the dedicated assets where these are used for both demand and generation. It also provides more transparency for suppliers and end users and as such should allow them to better understand how their charges are calculated. It should be noted that there are no consequential impacts on charges, or other industry documents, and no adverse effect on competition.
Conclusions:
As this is merely a clarification of our methodology, rather than the introduction of something new, we would like to introduce this from 1 April 2007. We would therefore ask Ofgem to consider this proposal and inform us of their decision. The new version of our methodology statement will be 1.7.

Appendix 1 – Asset valuation

4.2.1 Asset valuation

The asset valuation calculation is based on a three-year rolling average of the estimated capital cost of replacing the asset. The rationale behind this is to provide stability and consistency and limit any significant step-changes in the calculation.
This calculation is only undertaken for assets which:

- were not paid for by the customer; and
- are not fully depreciated (i.e. less than 20 years old). ~~; and~~
- ~~are not for sole use.~~

The apportioned g~~G~~ross a~~A~~sset v~~V~~alue (GAV) is calculated by taking the sum of the following calculations for each individual asset utilised in the connection:
For assets that are shared with other customers (i.e. not dedicated), the following formula applies:

$$\textbf{Estimated capital cost of the asset (based on a three-year rolling average)} \times \frac{\textbf{~~customer~~ Agreed demand capacity}}{\textbf{The rating of the asset}} \times \textbf{Number or length of the asset}$$

For dedicated or sole-use assets (i.e. not shared with other customers) that have subsequently been replaced and paid for by CE Electric UK, the following formula applies:

$$\textbf{Estimated capital cost of the asset (based on a three-year rolling average)} \times \frac{\textbf{Agreed demand capacity}}{\textbf{Agreed demand capacity + Agreed generation capacity}} \times \textbf{Number or length of the asset}$$

- for demand-only sites the percentage utilisation will be 100%.

  (e.g. if a dedicated asset were used to provide a demand agreed capacity of 6MVA and no generation capacity, the proportion would be 6/(6+0) = 100% allocated to demand); and
- for sites with both demand and generation the percentage utilisation is calculated based on the total demand and generation agreed capacities, resulting in a percentage utilisation value less than 100%.

  (e.g. if a dedicated asset were used to provide a demand agreed capacity of 6MVA and a generation agreed capacity of 36MVA, the proportion would be 6/(6+36) = 14.3% allocated to demand).

The following matrix shows how these elements are calculated for assets shared with other customers.

Asset Type	Estimated Capital Cost (£)	No/length	Rating of Asset	Apportioned Gross Asset Value (£)
AT_1	ECC_1	NL_1	AR_1	$AGAV_1 = ECC_1 * B / AR_1 * NL_1$
⋮	⋮	⋮	⋮	⋮
AT_n	ECC_n	NL_n	AR_n	$AGAV_n = ECC_n * B / AR_n * NL_n$
Total				**C**

Where

Parameter	Definition	Calculation
N	The total number of assets deployed in the connection	
B	~~Customer~~ Agreed demand capacity	
AT	Assets utilised in customer connection	
ECC	Estimated replacement capital cost (3-year rolling average)	
NL	Number of assets installed or the length of the assets	
AR	Rating of the asset	
AGAV	Apportioned gross asset value	**= ECC * B / AR * NL**
C	Total gross asset value	**= $AGAV_1$ + . . . + $AGAV_n$**

Appendix 2 - Operational repair and maintenance (OR&M)

4.2.3 Operational repair and maintenance (OR&M)

Operational repair and maintenance charges are calculated based on a three-year rolling average cost basis. Again the rationale behind this is to provide stability and consistency and limit any significant step-changes in the calculation. As a proxy this equates to approximately 1% of the apportioned gross asset replacement cost.
This charge only applies where the customer has not paid capitalised OR&M charges as part of the connection charge.
The OR&M charge is calculated by taking the sum of the following calculations for each individual asset utilised in the connection.
For assets that are shared with other customers (i.e. not dedicated), the following formula applies:

$$\textbf{Estimated OR\&M charge (based on a three-year rolling average)} \times \frac{\textbf{~~customer~~ Agreed demand capacity}}{\textbf{The rating of the asset}} \times \textbf{Number or length of the asset}$$

For dedicated or sole-use assets (i.e. not shared with other customers), the following formula applies:

$$\textbf{Estimated OR\&M charge (based on a three-year rolling average)} \times \frac{\textbf{Agreed demand capacity}}{\textbf{Agreed demand capacity + Agreed generation capacity}} \times \textbf{Number or length of the asset}$$

- for demand only sites the percentage utilisation will be 100%.

  (e.g. if a dedicated asset were used to provide a demand agreed capacity of 6MVA and no generation capacity, the proportion would be 6/(6+0) = 100% allocated to demand); and
- for sites with both demand and generation the percentage utilisation is calculated based on the demand and generation agreed capacities, resulting in a percentage utilisation value less than 100%.

  (e.g. if a dedicated asset were used to provide a demand agreed capacity of 6MVA and a generation agreed capacity of 36MVA, the proportion would be 6/(6+36) = 14.3% allocated to demand).

The following matrix shows how these elements are calculated for assets shared with other customers.

Asset Type	Estimated O R & M charge (£)	No/length	Rating of Asset	Allocated OR & M charges(£)
AT_1	$ORMC_1$	NL_1	AR_1	$AORM_1 = ORMC_1 * B / AR_1 * NL_1$
⋮	⋮	⋮	⋮	⋮
AT_n	$ORMC_n$	NL_n	AR_n	$AORM_n = ORMC_n * B / AR_n * NL_n$
Total				**G**

Where

Parameter	Definition	Calculation
n	The total number of assets deployed in the connection	
B	~~Customer~~ Agreed demand capacity	
AT	Assets utilised in customer connection	
ORMC	Estimated OR&M charge (3-year rolling average)	
AR	Rating of asset	
NL	Number of assets installed or the length of the assets	
AORM	Allocated OR&M charge	**= ORMC * B / AR * NL**
G	Total OR&M charge	**= $AORM_1$ + . . . + $AORM_n$**