MODIFICATION PROPOSAL ENW/2009/005

Electricity North West Limited

Proposal to amend the EHV charging methodologies for Designated EHV premises from April 2010 (until the introduction of the EHV Distribution Charging Methodology in April 2011)

Date of Issue: 1 September 2010

For approval by the Gas and Electricity Markets Authority

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1. Introduction

On 25 August 2009 the fourteen regional distribution network licensees submitted to the Authority the Common Distribution Charging Methodology (CDCM) seeking its approval and introduction on 1 April 2010. This is a significant step forward to gaining commonality of charging as the introduction of the CDCM in April 2010 means that all high voltage (HV) and low voltage (LV) connected network users will receive use of system charges calculated on the same basis. For customers connected at extra high voltage (EHV) the distribution network operators will introduce new charging arrangements by April 2011, so for the period from April 2010 to March 2011 there is a requirement to define the charging arrangements for these customers.

This modification report has been submitted at the same time and alongside the CDCM documentation to ensure that our stakeholders can readily see the overall package of changes to our charging arrangements being proposed for April 2010.

2. Description of the modification

2.1 The proposed methodologies

ENW proposes to continue to utilise the approved methodologies for EHV demand and generation charges as detailed in sections 4 and 5 of the Statement of Charging Methodology for Use of Electricity North West Limited's Electricity Distribution Network. As the costs and circumstances for each EHV customer are individual to each customer the use of system charges are calculated on a site-specific basis.

EHV Demand Customers

For Designated EHV premises the sole use and joint use assets utilised by each customer are identified. A cost for the operation and maintenance for these assets is calculated and an annuitised cost of the joint use assets is allocated based on the use of the assets. In addition, each Designated EHV demand customer contributes to the NGET Connection charges and Business Rates based on the each customer's maximum demand or maximum import capacity to system maximum demand and receives a standard customer related cost, for the provision of administration and billing. These costs are presented in three tariff components of standing charge (£/month), fixed charge (£/month) and capacity related charges (£/kVA/month). The total of the projected EHV demand revenue is determined and compared against a calculated EHV demand allowed revenue.

If required, the joint use assets costs for each customer are scaled proportionately to match the calculated EHV allowed revenue. The value of the allowed revenue for EHV demand customers as at 2009/10 is calculated as the sum of:

1. the PE term described in Annex A of Special Condition B1 is defined as the base costs of the EHV demand customers encapsulated by the price control in 2005 and inflated accordingly by the price adjuster index;
2. the base costs of the EHV Wheeled customers defined in 2005 and inflated accordingly by the price adjuster index;

3. the base costs for EHV demand customers connected post 2005 defined by the EHV methodology as at 2009/10.

The above values are inflated by the price adjuster index through for 2010/11 to define the allowed revenue for EHV demand customers as at 2010/11.

EHV Generation Customers

For EHV generation customers the charges are based on Distribution Generation Incentive scheme, in that each EHV generation customer's charge is based on the calculation of the allowed revenue to be recoverable from each customer. The value of the sole use assets and reinforcement assets provided for the connection are identified for each customer. An asset annuity charge is calculated by taking eighty percent of the reinforcement activities provided for the connection, annuitised over fifteen years at the cost of capital, defined in the price control period. A capacity charge of £1.50/kW per annum and an operation and maintenance charge of £1 are applied. Both values are inflated by the price adjuster index and applied per kW of installed generation capacity. As the charges are based on the allowed revenue no scaling is required.

The same methodology will apply to EHV Distribution Generation connected in 2010/11. For EHV Distributed Generation connected pre-2005 no charges will apply as the costs of connection are likely to have been fully funded at the time of connection. Pre-2005 EHV Distribution Generation will be within the scope of the EDCM from April 2011.

These approaches represents the 'minimum change option' discussed with Ofgem in the Common Methodology Group's workstream meetings. But in order to facilitate this 'minimum change' approach there is a need to amend the use of system charging methodology statement. This is covered later in section 4 of this modification report.

3. Reasons for the change with an explanation of how the proposed change better meets the relevant objectives

ENW is bringing forward these proposals to amend its EHV charging methodologies for April 2010 to facilitate the introduction of the CDCM with the aiming of minimising the changes to EHV charges for the 2010/11 period, as the charges are expected to change in April 2011 with the introduction of an EHV Distribution Charging Methodology (EDCM).

This modification report proposes updating the Charging Methodology for EHV demand and generation customers in the following ways:

EHV Demand Charges

1. Defining the application of the EHV charging methodology;
2. Updating some terms and all the numeric values in the methodology with commonly used terminology e.g. replacing the term "Local Authority Rates" with "Business Rates" and replacing the "6.9% rate of return" with "price control cost of capital" respectively; and
3. Re-defining the revenue reconciliation process.

EHV Generation Charges

1. Defining the application of the EHV charging methodology by excluding pre-2005 Distributed Generation;

2. Re-defining the scope of charging methodology for EHV connected Distributed Generation only by removing all references to HV and LV connected Distribution Generation now covered by the CDCM; and

3. Defining the revenue reconciliation process.

ENW must demonstrate that any proposed changes to its charging methodology better meets the relevant objectives set out in SLC 13.3 of the distribution licence. This justification is set out below.

Relevant objective 13.3(c)[1], requires "that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable (taking account of implementation costs), the costs incurred by the licensee in its distribution business".

EHV Demand Charges – There is no change to the current approved cost allocation methodology to EHV demand charges as ENW believes that the current approach delivers cost reflective charges. The minor change in approach results from the clarification of the revenue reconciliation process with the derivation of an EHV allowed revenue element. When revenue matching is required this is achieved through the proportionate scaling of the joint use assets utilised by each EHV customer. This approach preserves the differential between the charges across the EHV customers. The proposals therefore better meet relevant objective 13.3(c).

EHV Generation Charges - There is no change to the current approved cost allocation methodology to EHV generation charges as ENW believes that the current approach delivers cost reflective charges. The proposal to exclude all pre-2005 connected EHV Distribution Generation was done on the basis that the costs included in the existing EHV Distribution Generation allowed revenue was incurred by the connection of the post-2005 EHV Distribution Generation customers. Applying the proposed charging methodology to the pre-2005 connected EHV Distributed would not deliver cost reflective charges to these customers and would reduce the cost effectiveness of the charges to the current EHV Distribution Generation customers. The proposals therefore better meet relevant objective 13.3(c).

4. Proposed Changes

The proposed changes to ENW's Use of System Charging Methodology statement are detailed in Appendix A. For completeness ENW has amended its Use of System Charging Methodology to show the impact of the proposed changes from this modification and from the revocation of those elements of the current charging methodology that would fall away with the approval of the Common Distribution Charging Methodology. In addition section renumbering and housekeeping have been undertaken to align the statement to the Overview Statement, the central document for ENW's suite of licence condition statements and other general charging statements. It is this fully amended statement that is submitted to the Authority with this modification proposal. The changes to the statement from the approval of the Common Distribution Charging Methodology are summarised as:

- The existing section 1 (General Introduction) is slimmed down as much of the information is already contained with the Overview Statement

[1] SLC 13.3(c).

- The whole of existing section 2 (Principles) is revoked
- The whole of existing section 3 (Use of System Methodology - Regulated Demand Charges) is revoked
- The whole of section 6 (Use of System Charges) is removed
- The existing section 7 (Glossary of terms) is amended to remove terms not referred to in the statement.

5. Proposed illustrative structure and charges

The following table shows the comparison of the current use of system charges for all Designated EHV premises, including EHV embedded distribution networks, and indicative charges derived from methodology described above reconciled to calculated 2009/10 allowed revenue.

Customer	Existing Methodology	Proposed Methodology	Change, %
1	£308,837	£302,455	-2.1%
2	£163,472	£170,594	4.4%
3	£98,820	£95,371	-3.5%
4	£46,625	£44,371	-4.8%
5	£132,279	£125,394	-5.2%
6	£126,831	£120,249	-5.2%
7	£136,011	£128,830	-5.3%
8	£324,686	£333,741	2.8%
9	£426,338	£403,899	-5.3%
10	£27,791	£29,970	7.8%
11	£4,714	£5,088	7.9%
12	£97,695	£92,309	-5.5%
13	£209,420	£221,693	5.9%
14	£36,186	£36,105	-0.2%
15	£2,221	£2,221	0.0%
16	£1,810	£1,810	0.0%
17	£1,810	£1,810	0.0%
18	£88,622	£86,801	-2.1%
19	£97,561	£111,476	14.3%
20	£142,542	£138,169	-3.1%
21	£136,586	£131,624	-3.6%
22	£218,979	£209,276	-4.4%
23	£115,727	£124,902	7.9%
24	£18,010	£18,010	0.0%
25	£484,379	£459,899	-5.1%
26	£88,172	£87,042	-1.3%
27	£508,698	£495,154	-2.7%
28	£221,592	£219,981	-0.7%
29	£602,285	£569,673	-5.4%
30	£6,198	£6,198	0.0%
31	£5,324	£5,224	-1.9%
32	£1,810	£1,810	0.0%
33	£24,063	£23,867	-0.8%
34	£1,810	£1,810	0.0%
35	£130,901	£128,681	-1.7%

36	£427,904	£464,728	8.6%
37	£248,453	£269,761	8.6%
38	£120,672	£131,752	9.2%
39	£479,271	£513,853	7.2%
40	£66,980	£71,968	7.4%
41	£72,677	£72,395	-0.4%
42	£14,578	£13,809	-5.3%
43	£14,854	£14,059	-5.3%
44	£7,993	£7,713	-3.5%

Table 1 – Comparison of EHV Demand Charges

The illustrative charges show that the majority of EHV demand customers face a reduction in the overall charge from the current charges. Those customers that face an increased change do so as the base costs derived form the EHV methodology have previously been constrained by the revenue reconciliation process.

The following table shows the comparison of the current and proposed use of system charges for all EHV Distribution Generation.

Customer	Existing Methodology	Proposed Methodology	Difference
1	£186,550	£186,550	0.0%
2	£17,077	£17,077	0.0%

Table 2 – Comparison of EHV Generation Charges

There is no change in the charges for the EHV Distribution Generation customers.

6. A timetable for the implementation of the modification and charges changes

ENW intends to implement the proposed changes to the charging methodologies from 1 April 2010. In line with the normal timeline for the publication of use of system tariffs ENW will publish the amended Use of System Charging Methodology Statement by 31 December 2009 to accompany the publication of the Use of System Charging Statement populated with the indicative charges to be applied from 1 April 2010, provided a non-veto decision has been received from the Authority.

3. Use of System Charging Methodology – Extra High Voltage Demand Charges

Introduction

3.1 As the costs and circumstances of each Extra High Voltage (EHV) customer are individual to each customer, use of system charges for each Designated EHV premises will be considered on a site-specific basis. This methodology explains the calculation for site-specific use of system charges for Designated EHV premises.

3.2 This methodology will be valid from 1 April 2010 until the introduction of a new EHV Distribution Charging Methodology on 1 April 2011 and will be utilised to calculate EHV use of system charges for all Designated EHV premises[2], except where a Licensed Distribution Network Operator (LDNO) chooses to opt for the portfolio tariff approach defined within the Common Distribution Charging Methodology.

Model Inputs

3.3 EHV use of system charges are designed to recover all relevant costs associated with the provision, operation and maintenance of the EHV exit point (in so far as these were not recovered as part of the initial charge for the connection), the assets used in providing a delivery path from NGET's transmission network and the cost of billing and customer service. The main components of an EHV use of system charge are:

- Customer Related Costs;
- Sole Use Assets;
- Joint Use Assets;
- NGET Connection Charges; and
- Business rates.

Customer related cost

3.4 The cost of use of system billing is recovered via this EHV use of system charge component. This is equivalent to the contribution of a half-hourly metered charge customer towards DUoS billing. In addition, the cost of the annual review of the EHV use of system charge is recovered. The cost of the annual EHV use of system review is calculated as the time taken to complete this task multiplied by rates for the staff involved. Customer related costs are recovered via a monthly Standing Charge.

Sole Use Assets (SUA)

3.5 The capital cost of any assets provided for the sole use of the EHV site is normally recovered from the customer prior to energisation. This will be in the

[2] Premises connected to assets on the licensee's Distribution System at a voltage level of 22 kilovolts or more.

form of an upfront capital contribution. Where other specific customer arrangements were made in the past, this will be reflected in the asset values used to calculate this Use of System charge component.

3.6 The value of the SUA is reviewed annually to take account of modern equivalent asset value and any modifications to that part of our distribution system. An annual contribution towards the costs of on-going Operation and Maintenance of these SUA is calculated by multiplying the asset valuation of the SUA by the standard operation and maintenance percentage. This charge is recovered via an EHV use of system monthly fixed charge.

Joint Use Assets (JUA)

3.7 A proportion of the annuitised capital cost of existing joint user assets, used to provide supply from the grid supply point to the customer's exit point, is recoverable via the EHV use of system charge.

3.8 This proportion is based on the ratio of Maximum Capacity of the EHV exit point to the network maximum capacity of the JUA under consideration.

3.9 Additional to the annuitised capital costs are the annual costs of on-going Operation and Maintenance of these JUA and this charge is calculated by multiplying the asset valuation of the JUA by the standard operation and maintenance percentage. This charge is recovered via the EHV use of system charges.

3.10 The calculation of both capital and operational and maintenance costs is based on the site connection point's asset valuation and network capacity, which are provided by Electricity North West. These costs are reviewed annually to take account of inflation, any modifications to that part of our distribution system, the route of access to the NGET network and changes to the customer's Maximum Capacity.

The total annual JUA charges are recovered via a monthly capacity related charge.

NGET Connection Charges

3.11 A proportion of NGET's Connection Charge is recovered via the EHV Use of System charge. This proportion is based on the ratio of forecast site maximum demand compared to the forecast system maximum demand, applied to the total forecasted annual NGET Connection Charge value.

Business Rates

3.12 A proportion of the cost of Business rates is recovered via the EHV use of system charge. This proportion is based on the ratio of the site Maximum Capacity to forecast System Maximum Supply Capacity, applied to the total forecasted operational sites Business Rates bill. Business rates are recovered via a monthly capacity related charge.

Assumptions

3.13 The following assumptions are applied in the calculation for an EHV use of system charge:

- The allowed cost of capital for the price control period;
- The standard operation and maintenance rate of 1.4 percent is applied;

- Reactive power unit charges may be levied on an EHV customer in accordance with the charging criteria as defined in our Licence Condition 14 document titled 'Statement of Charges for Use Of Electricity North West Limited's Electricity Distribution Network'; and
- The Loss Adjustment Factors for EHV sites are considered on a site-specific basis and each site is issued with a unique Loss Adjustment Factor. The value of the Loss Adjustment Factor is to be applied to each site and is reviewed on an annual basis to take into account of any changes to site demand, site load factor and network configuration.

Model Outputs

3.14 The EHV use of system charge is structured in the following manner:

- Standing charge per month;
- Fixed charges per month; and
- Capacity Related Charges.

Model Template

3.15 The template below shall be used to calculate an EHV use of system charge.

Sole use assets

						Value, £ pa [A]
Deferred Capital Contribution						
		Value, £m [B]				Cost pa @ 1.4% [C = B*1.4%]
O&M charge						
	Asset 1					
	Asset 2					
Joint use assets			Customer capacity, MVA	Total capacity, MVA		
		Value, £m [D]	[E]	[F]	Ratio [G = E/F]	Cost pa @ 7.41% [H = D*G*7.41%]
	Asset 3					
	Asset 4					
	Asset 5					
		Value, £m [I]				Cost pa @ 1.4% [J = I*1.4%]
O&M charge						
	Asset 3					
	Asset 4					
	Asset 5					
NGET Connection Charges		£m pa [K]	Customer MD, MW [L]	System MD, MW [M]	Ratio [N = L/M]	Cost pa [O = K*N]
Business Rates		£m pa [P]	Customer ASC MVA [Q]	System Capacity, MVA [R]	Ratio [S = Q/R]	Cost pa [T = P*S]
Customer related cost						
Total						

Matching Charges to Allowed Revenue

3.16 The Authority caps the use of system income to Electricity North West. In the interim period the joint use asset costs of each Designated EHV premises are scaled proportionately to ensure the charges for Designated EHV premises match a calculated EHV allowed revenue. The allowed revenue for Designated EHV premises is calculated as the sum of base costs of each Designated EHV premise inflated by the price index adjuster.

4. Use of System Charging Methodology - Extra High Voltage Distributed Generation Charges

Introduction

4.1 This methodology will be valid from 1 April 2010 until the introduction of a new EHV Distribution Charging Methodology on 1 April 2011 and will utilised to calculate EHV use of system charges for all Designated EHV premises[3], except embedded distribution networks and pre-2005 connected Distribution Generation customers.

Parties Liable for Distributed Generation Charges

4.2 All Relevant EHV Distributed Generation is liable for Generator Use of System (GDUoS) charges. This methodology explains the calculation of Generator Use of System (GDUoS) charges for Distributed Generation customers connected after 1st April 2005 and for any upgrade or expansion to existing Distributed Generation plant, also after 1st April 2005.

Charging Methodology

4.3 The charges for EHV Distributed Generation customers is based on the allowed revenue as provided in the Distribution Generation Incentive that Ofgem introduced in the price control period 2005 to 2010. The allowed revenue calculation is made up of the following elements:

- **Asset annuity charge** – An annuity charge based on 80 percent of the total cost of the reinforcement works required to connect the Installed Generation Capacity of the Distributed Generation plant, over a 15 year life, with the price control cost of capital.
- **Capacity Charge** – A standard £1.50[5] per kW per annum of Installed Generation Capacity of the Distributed Generation plant.
- **Operation, Repair and Maintenance Charges** – A standard £1[4] per kW per annum of Installed Generation Capacity of the Distributed Generation plant to recover the allowable operation, repair and maintenance on the sole use and reinforcement assets of the connection.

4.4 Note, for Distributed Generation connections only, the cost apportionment factor rules detailed in our Licence Conditions 13 & 14 document titled "Statement of Methodology and Charges for Connection to Electricity North West Limited's

[3] Premises connected to assets on the licensee's Distribution System at a voltage level of 22 kilovolts or more.
4 All values are indexed by RPI (July to December).

Electricity Distribution Network' will only be applied to reinforcement costs up to a cap of £200[5] per kW of Installed Generation Capacity. All reinforcement costs in excess of this cap will be charged in full to the connecting generator alongside other connection charges.

Principles and basis of charges

4.5 Electricity North West aims to produce cost reflective charges for Relevant EHV Distributed Generation within the parameters of Distributed Generation Incentive Revenue.

4.6 The calculation of the charges to be recovered from EHV Distributed Generation customers will be based on actual costs of any reinforcement works required to connect their Installed Generation Capacity.

4.7 Electricity North West does not recover either Local Authority rates or NGET Connection or Use of System charges from EHV Distributed Generation customers.

4.8 Electricity North West shall discuss with the Distributed Generation customer and their nominated Supplier whether charges will be recovered either directly from the Distributed Generation customer, or from their nominated Supplier.

4.9 At the time of the connection application the Distributed Generation customer will inform Electricity North West of the MW capacity of his Distributed Generation plant. This declaration forms the basis of Electricity North West's assessment of the type and size of network assets required to be installed to connect the Distributed Generation to Electricity North West's distribution network. It will also set the level of on-going chargeable Installed Generation Capacity. The Distributed Generation customer will be charged at the level of his declared Installed Generation Capacity.

4.10 The Distributed Generation will be expected to operate, within the band between 0.95 lagging and 0.95 leading power factor. If the Distributed Generation operates outside of this range the customer will incur reactive power charges, unless the mode of operation has previously been agreed, in which case the customer is entitled to request a refund of any charges incurred. The value of the excess reactive power charge to be levied on Distributed Generation customers is set at the same value as that levied on demand customers.

Distributed Generation charging models and charges

4.11 Each Relevant EHV Distributed Generation customer will receive its own charging model.

4.12 The models deliver charges in pounds per kW per annum to be applied to EHV Distributed Generation customers.

Matching Distributed Generation charges to Distributed Generation Allowed Revenue

4.13 As the charges for each Relevant EHV Distribution Generation are generated using a charging methodology that mirrors the allowed revenue calculation for each Relevant EHV Distribution Generation there is no revenue matching required.

Interruption Standard Payment

4.14 Electricity North West offers an interruption standard payment to EHV Distributed Generation customers when their connection to our distribution network is unavailable, subject to the terms and conditions of the connection agreement with the Distributed Generation customer.

4.15 Electricity North West will offer a standard interruption payment, of £0.002 kWh-1 for every whole hour without network availability (except for prearranged outages), to EHV Distributed Generation customers that they have a firm (secure) connection to our distribution network.