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# STATEMENT OF CHARGING METHODOLOGY FOR USE OF ELECTRICITY NORTH WEST LIMITED'S ELECTRICITY DISTRIBUTION NETWORK

This statement is effective from 1st April 2010~~9~~

This statement is approved by the Gas and Electricity Markets Authority (GEMA)

Dalton House,
104 Dalton Avenue,
Birchwood Park,
Birchwood,
Warrington,
WA3 6YF

Registered No. 2366949 (England)

# Contents



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# 1. ~~General~~ Introduction

## ~~Who we are~~

~~1.1Electricity North West Limited is the licensed electricity distribution business serving the North West part of England, from Buxton to Carlisle and from Blackpool to Settle. We distribute electricity to a range of customers, comprising domestic, commercial and industrial, from a network of 14,000 km of overhead lines, 45,000 km of underground cabling and substations at various system levels. Our distribution licence is issued under the Electricity Act (1989)[i]. This statement is produced by Electricity North West Limited, referred to in this statement as 'Electricity North West, although certain responsibilities may be undertaken by associated companies or agents.~~

### ~~1.2 Licence Obligations~~

~~1.2This statement describes the use of system charging methodology, under which authorised users will be charged for use of Electricity North West's distribution system in 2009/10.~~

1.1 This statement describes the use of system charging methodology, under which authorised users will be charged for use of Electricity North West's distribution system in 2010/11.

~~1.3~~1.2 Electricity North West is obliged, under Condition 13 paragraph 1(a) of the Electricity Distribution Licence, to prepare a statement, approved by the Authority, setting out the methodology, upon which charges will be made for the provision of Use of System. We are also obliged to review this statement annually in accordance with Condition 13, paragraph 2(a) and in order to comply with paragraph 2(b) make such modifications to the use of system charging methodology statement that better achieve the 'relevant objectives'[1] ~~[ii]~~ as defined in paragraph 3 of Condition 13.

~~1.4~~1.3 Words and expressions used in this statement have (unless specifically defined herein) the definitions given to them in the Act or the Licence and shall be construed accordingly.

~~1.5~~1.4 The Gas and Electricity Markets Authority (hereinafter referred to as the "Authority") has approved this statement. Future modifications will also be subject to approval by the Authority. This statement is available free, in pdf format, from the Electricity North West website at Electricity North West Limited. Alternatively a paper copy of this statement is available on request at a cost of £10 plus packing, postage and VAT.

## ~~Price Control~~

~~1.6Electricity North West is a licensed distribution business regulated by the Gas and Electricity Markets Authority. The price control mechanism is specified in special conditions within the Distribution Licence. The price control, which is reviewed every 5 years, prescribes the amount of revenue that Electricity North West is allowed to recover from its customer base each year. Use of System charges may vary year on year, as Electricity North West sets its use of system charges to recover its allowed revenue.~~

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[1] See definition in the Glossary of Terms.

## ~~Use of System~~

~~1.7Electricity North West will levy use of system charges for utilisation of its network, for the supply of electricity to end users and/or the transportation of electricity across its network from entry points. Electricity North West's use of system tariffs are published in our Licence Condition 14 document titled 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network'.~~

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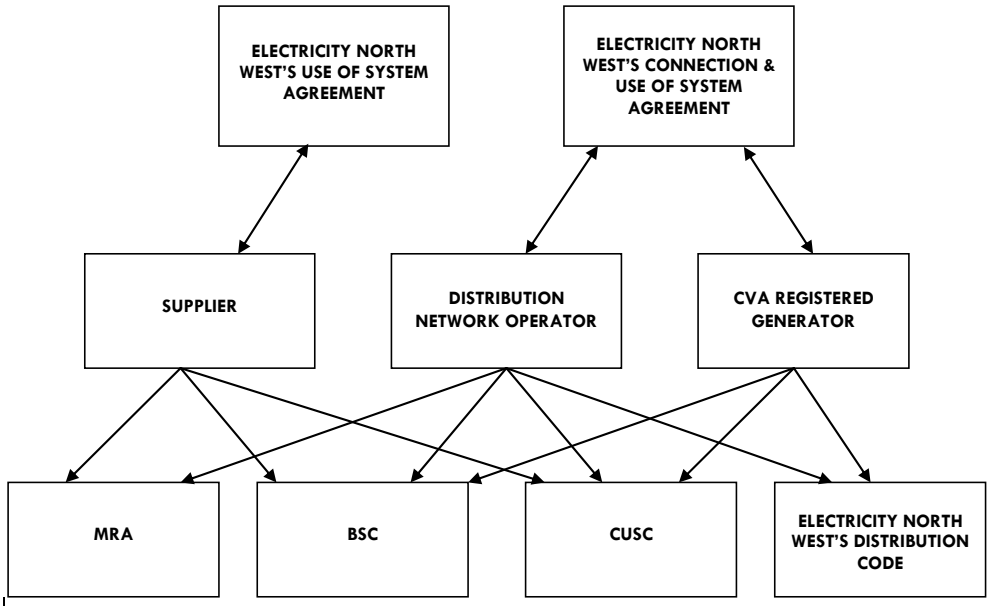


## ~~Connection and Use of System Boundary~~

~~1.8Charges for distribution assets are split between connection and use of system. The boundary (which is consistent for demand and generation) is explained in our Licence Conditions 13 & 14 document titled 'Statement of Charging Methodology and Charges for Connection to Electricity North West Limited's Electricity Distribution Network'. This statement details the calculation of connection charges, and also contains indicative charges and examples, to aid understanding of connection charges.~~

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~~This statement details the charging methodology that is applied for the calculation of use of system charges. Our Licence Condition 14 document titled 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network' details the use of system charges that are applied. These statements are available free, in pdf format, from our website, at Electricity North West Limited or available on request at a cost of £10 plus packing, postage and VAT by following up the contact details on page 6.~~

## ~~The Contractual Framework~~

~~1.9Users entitled to use Electricity North West's electricity distribution network are those who are authorised by Licence, or by exemption under the Act, to supply, distribute or generate electricity. In order to protect all users of the system, Electricity North West will require evidence of authorisation before agreeing terms for use of the system. NOTE: In the rest of this commentary, requirements applying to Users should be taken~~

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to mean Licensed Suppliers, Licensed Embedded Electricity Distributors, Licensed Generators or Licensed Exempt Generators only.

1.10Users seeking to use the system will be required, prior to using the system, to enter into an agreement with Electricity North West, setting out the obligations of both parties. The party seeking use of the system will be required to:

- pay all charges due in respect of use of the system, as described in our Licence Condition 14 document titled 'Statement of Charges for Use of Electricity North West Electricity Distribution Network' and the accompanying schedules;
- be a party (where the user is a Licensed Supplier or a Licensed Distributor) to the Master Registration Agreement (MRA) for the provision of metering point administration services within Electricity North West's authorised area;
- enter into the National Grid Electricity Transmission's (NGET) Connection and Use of System Code and any necessary Bilateral Agreement, governing connections to and use of NGET's transmission system, unless Electricity North West is informed by NGET that this is not required in any particular case;
- be a party to the Balancing and Settlement Code unless Electricity North West is informed by Elexon that this is not required in any particular case; and
- comply with the provisions of the Distribution Code (a copy of which is available free of charge from the Distribution Code website, www.dcode.org.uk or alternatively an unserviced copy is available for £50 plus packing, postage and VAT by following up the contact details on page 6).

1.11If the applicant and Electricity North West fail to agree contractual terms, or any variation of contractual terms proposed by Electricity North West, either party may request settlement by the Office of Gas and Electricity Markets (OFGEM).

1.12While the terms and conditions in the agreements will be consistent with those in this statement, the agreement will take precedence. Where a User, having entered an agreement for use of Electricity North West's electricity distribution network, ceases, for whatever reason, to be a User with respect to that use of the system, then the entitlement to use of the system will cease forthwith, but the operator will continue to be liable under the agreement unless and until the agreement is terminated. In order to avoid any liability in this regard, a User, wishing to terminate his agreement or wishing to notify a change, should give Electricity North West no less than 28 days' notice. Electricity North West will normally respond within 28 days of a notification of change.

1.13Where a person requires a connection to Electricity North West's electricity distribution network pursuant to Section 16 of the Electricity Act (1989), the provisions of this statement are without prejudice to the provisions of sections 16 to 22 the Electricity Act (1989) (those sections which deal with the rights, powers and duties of Electricity North West, as an electricity distributor), in respect of the distribution of electricity to owners or occupiers of premises.

**Schematic Diagram showing contractual relationships**

## ~~Contact Details~~

~~1.1~~4~~1~~.5 This statement has been prepared, in order to discharge Electricity North West's obligation under Condition 13 of the Electricity Distribution Licence. If you have any questions about the contents of this statement, please contact us at the address shown below. ~~Also given below are contact details for the Office of Gas and Electricity Gas Markets, in case prospective users wish to enquire separately on matters relating to this statement.~~

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# 2. Common Distribution Charging Methodology

## ~~Introduction~~Principles

~~1.1~~ 2.1 The Common Distribution Charging Methodology was approved by the Authority in November 2009 and became part of DCUSA in December 2009. The Common Distribution Charging Methodology is available for download from ~~Sign post to the~~ the DCUSA website at www.dcusa.co.uk and ~~where the CDCM is to be posted (DCUSA and~~ the ENW website at www.enwltd.co.uk~~s?~~). ~~Pursuant to the requirements of Condition 13 of the Electricity Distribution Licence, the following numbered paragraphs relate to the transport of electricity on Electricity North West's system by Users to exit points from the system, and to the transport of electricity on the system for supply to Users and to generators including customers with on-site generation.~~

~~2.2Where a supply of electricity is provided over electric lines or electrical plant comprising a part of Electricity North West's electricity distribution system, a charge for use of the system will be levied either on the Supplier of the electricity or the Embedded Distributor. The relevant charges are described in our Licence Condition 14 document titled 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network' and are payable by reference to the characteristics of the supply, in accordance with the categories of supply described in the section headed 'Notes on Use of System Tariffs'.~~

~~2.3As far as is practical, charges are cost reflective. The charges are therefore differentiated to reflect key features such as the voltage of connection to the system, the characteristics of the load, and installation of the appropriate use of system metering.~~

~~2.4The charges for use of the system reflect:~~

- ~~the costs of providing, operating and maintaining the electricity distribution system to the standards prescribed by the Electricity Act (1989) other than those costs which are recovered through charges paid to Electricity North West in respect of connection to the system, such that electricity can be transported efficiently through the system to exit points or from entry points; and~~
- ~~the costs to Electricity North West of providing certain services and performing functions for Users, on terms which Electricity North West is under a duty to offer under its Electricity Distribution Licence, in order to support the operations of a fully competitive supply market in its authorised area. These services include: Metering Point Administration Services; Energisation and De-energisation and Re-energisation services; Revenue Protection Services; and Radio Teleswitch Services. Electricity North West is either wholly or partly remunerated through use of system charges or through transaction charges for these services. The cost for provision of these services is detailed in our Licence Condition 14 document titled 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network'.~~

~~All charges for use of the system include a reasonable return on the relevant assets, and the revenues arising from the charges are subject to regulation in accordance with the terms of the Licence.~~

~~2.5Charges to Suppliers and Embedded Distributors for the use of the system are evaluated as if from the Grid Supply Points that connect our network to NGET's transmission network. These charges are designed to reflect both typical electrical flows on the system and the need to provide adequate capacity at all voltage levels to protect the security of the system. Paragraph 10 may also be relevant. Charges are applied to the electricity volumes as measured at the exit or entry points, as indicated in paragraph 2.6 below.~~

~~2.6The charges for use of the system may include some or all of the following elements:~~

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- a standing charge to cover the costs which do not vary with the extent to which the supply is taken up. This consists of a daily or monthly rate per site;
- an availability charge per kVA to cover the system capacity at each voltage level which is attributed to the supply. Alternatively, demand charges may be levied for unmetered supplies;
- a unit charge per kWh delivered to the exit point from the system, designed to reflect utilisation of the system at all relevant voltage levels. Units for metered supplies are based on actual meter readings, or profiled consumption based on actual meter readings and/or estimated annual advances. Units for unmetered supplies are based on the certified estimated annual consumption of an inventory of unmetered equipment;
- an excess reactive unit charge per kVArh delivered to the exit point from the system (see paragraph 2.13 below). The excess reactive power charge reflects the additional costs of providing capacity to deliver reactive power above the standard built into other charges; and
- transactional charges for certain services provided by Electricity North West on an individual basis to Licensed Suppliers. Details are given in the Statement of Charges for Miscellaneous Services offered by Electricity North West Limited's in Sections 2 to 5 inclusive.

2.7 The standing charge for use of system noted in paragraph 2.6 above may include, dependent on tariff, an amount to reflect the cost of the service cable to the premises and its termination, a contribution to the cost of the local network except as recovered within the connection charge, the costs of the registration service in accordance with the Master Registration Agreement and the cost of use of system billing.

The unit charge recovers an amount, other than that recovered through the connection charge, towards the cost of providing and maintaining the network, for all customers, with the exception of that amount recovered as availability charges for MD metered customers.

The availability charge recovers an amount, other than that recovered through the connection charge, towards the costs of providing and maintaining the network local to the customers' connection point, for those customers installing MD metering. During the first year, following the commencement of a new supply or the provision of increased capacity, the charge will never be less than the agreed capacity.

2.8 Electricity North West will provide, on request, metering assets. The costs of meter asset provision (i.e. the provision of a meter and any related timing device) are charged for on a rental basis. Where meter asset provision is requested the rental charges are added to the standing charge in DUoS rates.

Full details of all of our metering charges are available in our Licence Condition 36 document titled, 'Statement of Charges for Distributor Legacy Basic Meter Asset Provision and Data Services offered by Electricity North West Limited. This statement is available free, in pdf format, from our website at Electricity North West Limited or available on request at a cost of £10 plus packing, postage and VAT by following up the contact details on page 6.

Separate use of system tariffs exist, which exclude MAP rental, for suppliers wishing to use meter providers other than Electricity North West. The meter operator must ensure that the data provided by the metering meets Electricity North West's requirements for use of system billing purposes. Whether Electricity North West is appointed to carry out this task or the supplier installs his own energy metering, Electricity North West reserves the right to install its own metering equipment.

2.9 Charges for use of system will normally be payable on demand, in accordance with the billing period and payment terms agreed with the party using the system. Electricity North West reserves the right to require appropriate security, in respect of the charges estimated to arise, depending on the circumstances of the supply and on the basis of the agreed payment terms. Interest payment may be applied to late payments. Invoices for residential and some business supplies will generally be calculated according to the Supercustomer Methodology for Use of System Billing, a description of

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which is given in our Licence Condition 14 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network'.

2.10 Where a supply is to be provided wholly or partly over Electricity North West electricity distribution network to an exit point from that system, the Supplier or Embedded Distributor must demonstrate that, at all times, the quantity of electricity entering the network, for the purpose of providing that supply, equals the metered quantity delivered from that exit point plus the amount of electrical losses appropriate to the voltage at which the supply is delivered and to the source of the supply, as shown in the schedule of loss adjustment factors Section 5 of our Licence Condition 14 document titled 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network'. Electricity North West reserves the right to install use of system metering equipment at the boundary/exit point and levy a charge for this equipment. Relevant metering information or being a party to the Balancing and Settlement Code will be considered to be adequate demonstration. Suppliers should refer to Section 5 to calculate the amount of electricity that they must provide. The same loss adjustment factors are reflected automatically in the settlement system.

2.11 Where the supply is to be provided over Electricity North West's electricity distribution network on either an intermittent or continuing basis to any premises with own generation, charges for use of the system will be levied with respect to the system capacity, provided to meet the maximum power required, as requested by the party seeking use of the system and the extent to which that supply is taken up.

2.12 Where Electricity North West, after evaluation of the characteristics of the requested use of the system, accepts that none of the categories of charges in the schedules of our Licence Condition 14 document titled 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network' is appropriate, or where supplies are to be provided at Extra High Voltage (EHV), Electricity North West will offer special arrangements. Such charges will be calculated according to the same principles as the other use of system charges shown in the schedules of our Licence Condition 14 document title 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network' in most cases. Electricity North West will make its offer of terms within 28 days of receiving the application, following receipt of the full and final information necessary for the preparation of the terms.

2.13 Where use of the system is sought at a standard of security different from that referred to in the Distribution Code Electricity North West may consider special arrangements with respect to that supply. Where the power factor of the supply is less that 0.95, it will normally be possible for Electricity North West to offer use of system, subject to paying appropriate charges (see our Licence Condition 14 document titled 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network', Tables 3.3, 3.4 and 3.5). In such cases, specially assessed loss adjustment factors may apply at Electricity North West's discretion.

2.14 In all cases the charges for use of the system include a contribution to recovery of NGET's connection charges. These amounts are calculated to be appropriate to each class of customers. This is on the basis that the total contribution to NGET's connection charges paid by any class of customers is in proportion to the demand of that class of customer.

2.15 Charges to generators for use of Electricity North West's electricity distribution network will be made for use of the system in respect of electricity that the generator imports from and exports to the system. The generator will be charged for use of the system in respect of such imports or exports in accordance with paragraphs 2.2 to 2.14 above. Also, our Licence Condition 14 document titled 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network', Section 5, (Loss Adjustment Factors), may be relevant.

2.16 When a new embedded licensed network connects to ENW's electricity distribution network a Maximum Import Capacity (expressed in kVA) is agreed to be provided at the Connection Point. This value will be agreed with Electricity North West and the IDNO and recorded in the Bilateral Connection Agreement covering the embedded

~~network. If phased capacity charges are required, the Bilateral Connection Agreement will also include a phased Maximum Import Capacity to recognise the development of the embedded network. A review of the phased Maximum Import Capacity will take place annually on the anniversary of the energisation of the embedded network. The chargeable supply capacity for an embedded licensed network will be calculated as described in paragraph 2.20 in the Use of System Charging Statement.~~

## 3. Use of System Methodology – Regulated Demand Charges

3.1 The methodology to calculate tariffs is designed to secure cost reflectivity. This is achieved through a two stage process. The first of these is to determine yardstick tariffs for each class of customer. The second is to modify these yardstick tariffs to ensure that the revenues generated through Use of System Charges match the allowed revenue.

### The Model

3.2 The Distribution Reinforcement Model (DRM - also known as the 500 MW model) is used to calculate yardstick costs. Originally developed in the 1980s by the Electricity Council it has been modified to represent Electricity North West's electricity distribution network. The DRM is a theoretical model, intended to approximate long run marginal costs, based on an additional 500 MW of load at each distribution system level on a greenfield site. It consists of an appropriate mix of underground and overhead cables at each voltage level, to reflect the existing urban and rural network structure and the required mix of transformer capacity, at each voltage level, to comply with security of supply requirements and standard equipment. The Electricity North West's DRM consists of the mix of network levels of 132 kV, 33 kV, 11 kV and LV and the transformation levels of 132/33 kV, 33/11 kV and 11 kV/LV.

### Costs

3.3 The annuitised capital costs for each level of the electricity distribution system from 132 kV to LV are calculated, using current costs based on an analysis of the last three years' actual data from Electricity North West's unit costs estimating package. The annuitisation factor utilised is based on 6.9 percent allowed rate of return over an assumed 40 year lifetime of the assets. In addition, the model builds in annualised operation and maintenance costs for each voltage level.

3.4 Other business costs including local authority rates, minimum supply connection costs, i.e. the sole use costs attributed to the connection, metering costs and billing costs are also included in the various tariff components make-up.

### Yardstick Calculation

**3.5** To calculate the yardstick costs, the model is developed for each class of customer. The model takes into account the costs at each level of the system, from 132 kV to LV, building in diversity factors to reflect the usage of network remote from the connection point and once divided by 500 MW, derives the £/kW yardstick cost. Average load factors and assumed coincidence factors and power factors are then utilised, to turn the £/kW into a cost reflective unit rate, expressed in £/kWh, for the customer class.

The 500 MW model assumes an average power factor within the range 0.95 leading and 0.95 lagging, so for customers whose power factor deviates from the norm, excess reactive power charges are also levied to recover the extra costs of providing the additional capacity needed to deliver their requirements. The excess reactive power charge expressed in pence/kVArh is calculated as the incremental cost of providing one unit of reactive power over the norm. Reactive power charges are only applied to those kVArh units in excess of a third of the kWh units supplied.

**3.6** The unit rate in the 'yardstick price' is the output of the yardstick cost calculation. For Maximum Demand tariffs, the £/kW is re-allocated into an availability charge component. The availability charge component represents the users' assumed utilisation of the local network of:

- 100% relating to voltage level of connection;
- 100% next level of transformation; and
- 20% next voltage level.

### Format of Charges

**3.7** Tariff structures are developed in conjunction with the specification of, metering installed in customers' premises (which is also driven by the settlement data requirements).

Those tariffs relating to customers, without Maximum Demand metering, consist of the following components:

- Customer related; and

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- Unit related charge(s)

3.8 Those tariffs relating to customers, with Maximum Demand metering, consist of the following components:

- Customer related;
- Unit related charge(s);
- Capacity related charge; and
- Reactive power charge.

Reactive Power Charges

3.9 Excess reactive power charges are derived from the same network yardstick costs used for other DUoS components. However those elements of the yardstick that are recovered through kVA based availability charges are excluded. What remains are network yardstick costs that are recovered on a kW or kWh basis. Since standard kW and kWh charges assume a power factor of 0.95, the excess reactive power charge is based on the variation in the appropriate yardstick costs as power factor varies below 0.95. These costs are converted into a p/kVArh charge using the customer class load factor and the weighted average power factor for qualifying customers.

Allocation between fixed and variable charges

3.10 Costs are allocated to fixed and variable elements in a way designed to achieve the cost reflectivity of these costs imposed on the network by the customer. 'Customer Related Costs' (such as those related to sole user assets, metering and billing) are included in (standing) charges. Those costs that vary with the volume of electricity used or the amount of capacity provided (such as joint user assets and local authority rates) are included in variable charges.

Matching Charges to Allowed Revenue

3.11 Price controls limit the charges Electricity North West can make. Following production of yardstick prices checks are made to compare the output with the level of revenue allowed under price controls and the format of prices that will be published. In particular the following issues are addressed.

- The need to express charges in the right format (e.g. pence per MPAN per day, pounds per kVA per month, etc.) and to the number of decimal places appropriate for publication and billing;
- The need for the total revenue expected to be generated by the final charges to match allowed revenue[iii].

Final Charges

3.12 Once prices have been established, which meet the allowed revenue, a p/kWh element is added to recover NGET connection charges. The amount added is calculated as being appropriate to that class of customer. This is on the basis that the total contribution to NGET connection charges paid by any class of customer is in proportion to the demand of that class of customer.

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~~3.13The flowchart below shows steps taken in the development of use of system tariffs using the 500 MW model.~~

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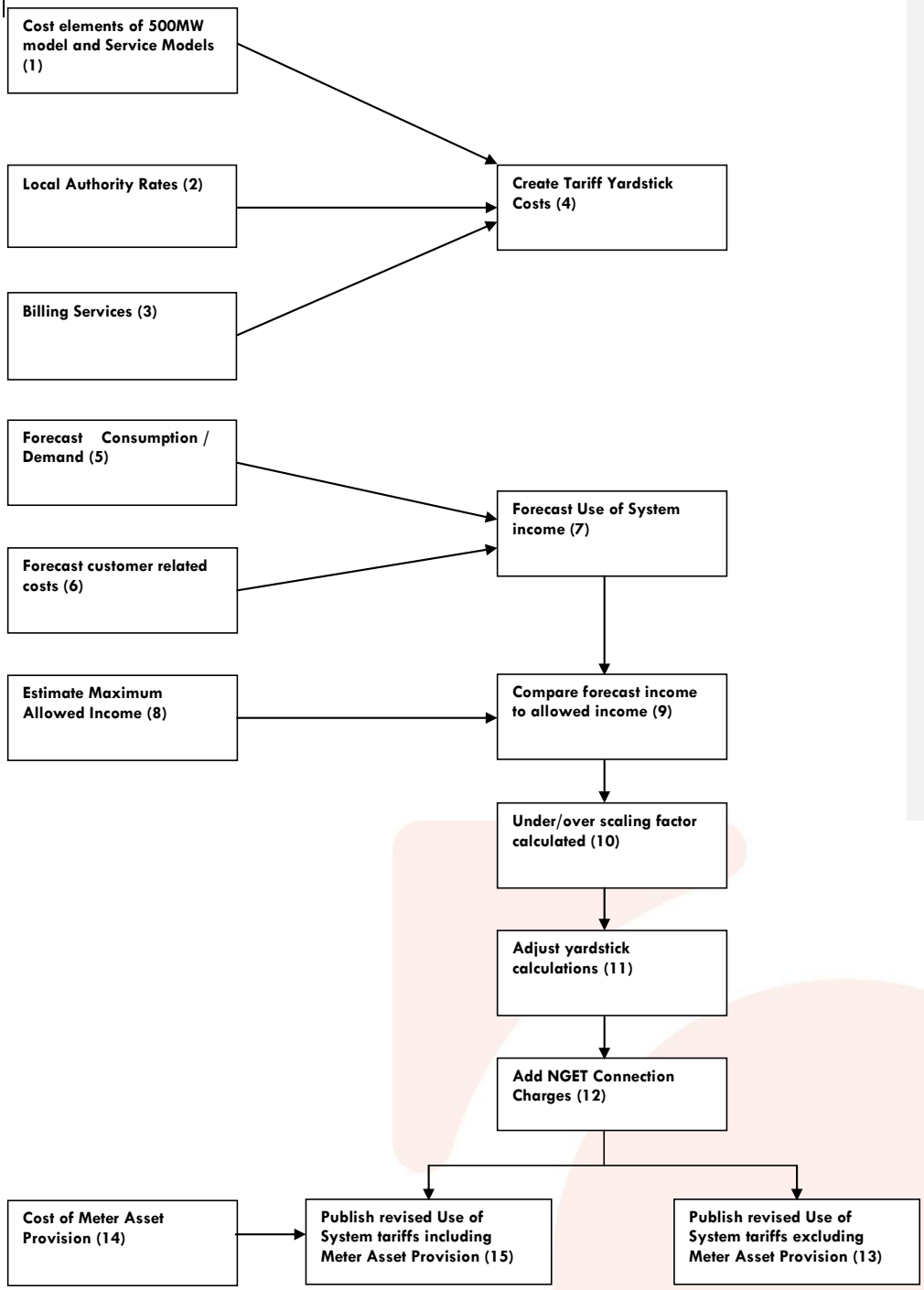

~~Example - Domestic Unrestricted DUoS Charge~~

~~3.14The domestic unrestricted charge has a mixture of unit rate and standing charge components. Unit rates are derived from the yardstick price calculation, explained above, including LA rates, whilst Standing charges are derived from 'Customer Related Costs'. These are classified as being the ongoing Minimum Supply Costs of connecting, ie sole use assets relating to service position and a percentage of local mains (not already covered by connection charges), the Meter Asset Provision and the Billing costs.~~

~~Electricity North West adopts a shallowish connection boundary policy. This charging concept is aimed at customers contributing to local assets, designed primarily to allow them to connect to our distribution system, whilst any upstream asset costs would be recovered through Use of System. A domestic unrestricted charge would pick up all the costs attributable to all system levels, as they are connected at Low Voltage.~~

| ~~Network costs (£/kW/y)~~ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | ~~Network level~~ | | | | | | |
| ~~Connect~~ | ~~132 kV~~ | ~~132/33 kV~~ | ~~33 kV~~ | ~~33/11 kV~~ | ~~11 kV~~ | ~~11 kV/LV~~ | ~~LV~~ |
| | ~~full costs for charges without availability charge~~ | | | | | | |
| ~~at LV~~ | ~~£6.11~~ | ~~£3.82~~ | ~~£10.56~~ | ~~£8.18~~ | ~~£11.71~~ | ~~£10.15~~ | ~~£7.69~~ |

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~~These costs are then apportioned, according to the average class load factor and coincidence factors relating to time of day usage.~~

| ~~Tariff group details~~ | | ~~Cost per unit yardstick at seven levels~~ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | ~~Units per~~ | ~~Network levels~~ | | | | | | | ~~Period~~ |
| ~~Group~~ | ~~kW factor~~ | ~~132kV~~ | ~~132/33kV~~ | ~~33 kV~~ | ~~33/11 kV~~ | ~~11kV~~ | ~~11kV/LV~~ | ~~LV~~ | ~~total~~ |
| | ~~kWh/y/kW~~ | ~~p/kWh~~ | ~~p/kWh~~ | ~~p/kWh~~ | ~~p/kWh~~ | ~~p/kWh~~ | ~~p/kWh~~ | ~~p/kWh~~ | ~~p/kWh~~ |
| ~~Domestic UR~~ | ~~3400~~ | ~~0.170~~ | ~~0.106~~ | ~~0.293~~ | ~~0.227~~ | ~~0.325~~ | ~~0.300~~ | ~~0.136~~ | ~~1.56~~ |

~~Additions to the unit yardstick costs provided are the costs of Local Authority rates. This then derives the complete unit rate yardstick picture.~~

# ~~4.~~3. Use of System Charging Methodology – Extra High Voltage Demand Charges

## Introduction

~~4.1~~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~~.

## Standard EHV Charging Methodology

### Model Inputs

~~4.2~~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
- ~~Local Authority~~Business rates.

**Customer related cost**

~~4.3~~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)**

~~4.4~~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 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.

~~4.5~~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

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

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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)**

~~4.6~~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.

~~4.7~~3.8 This proportion is based on the ratio of Maximum Import ~~Authorised Supply~~ Capacity of the EHV exit point to the network maximum capacity of the JUA under consideration.

~~4.8~~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.

~~4.9~~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 Import ~~Authorised Supply~~ Capacity.

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

**NGET Connection Charges**

~~4.10~~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.

**~~Local Authority (LA)~~ Business Rates**

~~4.11~~3.12 A proportion of the cost of ~~operational LA~~ business rates is recovered via the EHV use of system charge. This proportion is based on the ratio of the site Maximum Import ~~Authorised Supply~~ Capacity to forecast System Maximum Supply Capacity, applied to the total forecasted operational sites Business ~~LA~~ R~~r~~ates bill. Business ~~LA~~ rates are recovered via a monthly capacity related charge.

## Assumptions

~~4.12~~3.13 The following assumptions are applied in the calculation for an EHV use of system charge:

- The allowed cost of capital ~~rate of return~~ for the price control period ~~from 1st April 2005 to 31st March 2010 is 6.9 percent;~~
- 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 Loss Adjustment Factor methodology is described in our document titled "Statement of Loss Adjustment Factor Methodology for Electricity North West Limited's Electricity

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Distribution Network". 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

~~4.13~~3.14 The EHV use of system charge is structured in the following manner:

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

## ~~Matching Charges to Allowed Revenue~~

~~4.14The Authority caps the use of system income to Electricity North West. The EHV charges are scaled proportionately to match the allowed revenue.~~

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## ~~A Common Charging Framework~~

~~4.15Electricity North West has employed a number of methods to calculate connection charges in the past. This results in differing levels of assets values to be recovered through use of system charges. However the methodology used to move from asset values to prices has been applied consistently. In this way all EHV customers could be expected to pay the full costs associated with their use of our network over the life of their connection. We have reviewed our cost models to reflect forward looking estimates of the value of assets involved in serving each customer. Where customers are connected to generation rich networks, this has also taken account of the prospect of some asset requirements being determined by generation capacity rather than demand. This has lead to significant movements in prices either up or down. We have also begun work on a new approach to charging that will ensure greater consistency in the treatment of generation and demand using our network. This is likely to have a differential effect on prices to individual customers and therefore, in order to minimise the disturbance to our EHV customers over this period of change we intend to limit the impact of any immediate changes to our cost model so that no customer sees an increase greater than the general movement of other customers' charges (ie an increase based on RPI adjusted for any under/over recovery from prior years) from 1 December 2006 (unless their capacity or network requirements have changed).~~

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## Model Template

~~4.16~~3.15 The template below shall be used to calculate an EHV use of system charge.

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**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**

| | | | | | |
|---|---|---|---|---|---|
| | Value, £m [D] | Customer capacity, MVA [E] | Total capacity, MVA [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] |
| **Local Authority 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

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3.16 The A~~a~~uthority 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 using a multiplier approach 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 premises inflated by the price index adjuster.

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# ~~5.~~4. Use of System Charging Methodology – Extra High Voltage –Distributed Generation Charges

## Introduction

~~5.1~~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 be 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.~~Ofgem has determined that distribution businesses should introduce use of system charges for Distributed Generation, rather than relying on full recovery of all asset related costs in an up front connection charge. Electricity North West has worked with Ofgem and the other distribution licencees in the Implementation Steering Group to develop a framework for a Distributed Generation charging methodology for the 'Interim Arrangements'iv.~~

~~5.2~~4.1 ~~Distributed Generation customers should be aware that this methodology has been developed for implementation under the Interim Arrangements and that in time a new charging methodology will be implemented to fulfill the Longer Term Framework. For the avoidance of doubt, Distributed Generation customers will also be charged Use of System for their demand requirements, in accordance with section 3 of this statement.~~

## Parties Liable for Distributed Generation Charges

~~5.3~~4.2 All Relevant EHV Distributed Generation is liable for Generator Use of System (GDUoS) charges. This methodology explains the calculation of G~~e~~enerator 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

~~**Distributed Generation Allowed Revenue**~~

~~5.4~~4.3 The ~~broad framework of~~ charges for EHV Distributed Generation customers ~~in the interim period i~~is based ~~dictated by~~ on the allowed revenue as provided in the Distribution Generation Incentive that Ofgem introduced in the price control period from 2005 to 2010.~~from 1 April 2005.~~ 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.~~a rate of return of 6.9 percent~~
- **Capacity Charge** – A standard £1.50[4]~~[5]v~~ per kW per annum of Installed Generation Capacity of the Distributed Generation plant. ~~An additional £3[5] per kW per annum of Installed Generation Capacity of the Distributed Generation plant will be included for any connections in an RPZ (Registered Power Zone).~~

[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).

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- **Operation, Repair and Maintenance Charges** – A standard £1~~4~~[54] 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.

~~5.5~~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 Electricity Distribution Network' will only be applied to reinforcement costs up to a cap of £200[54] 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.

4.5 The charges and therefore the allowed revenue for each Relevant EHV Distributed Generation customer are calculated using the above.

**Principles and basis of charges**

~~5.6~~4.6 Electricity North West aims to produce cost reflective charges for Relevant EHV Distributed Generation within the parameters of ~~Ofgem's~~ Distributed Generation Incentive Revenue~~.gulatory Instructions and Guidance.~~

~~5.7~~4.7 The calculation of the charges to be recovered from EHV Distributed Generation customers will be based on actual ~~either the average expected~~ costs ~~(for HV/LV connections) or actual costs (for EHV connections)~~ of any reinforcement works required to connect their Installed Generation Capacity.

~~5.8~~4.8 Electricity North West does not ~~intend at present to~~ recover either Business ~~Local Authority~~ rates or NGET Connection or Use of System charges from EHV Distributed Generation customers. ~~Electricity North West shall keep this approach under review and when appropriate propose a modification to introduce a charging mechanism for the recovery of these charges.~~

~~5.9~~4.9 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.

~~5.10~~4.10 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. ~~for the first five years.~~

~~5.11~~4.11 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.

~~**Groups of Distributed Generation connections**~~

~~5.12The following groups will be used for the calculation of Distributed Generation charges:~~

- ~~EHV Distributed Generation (HH metered)~~
- ~~HV, LV Distributed generation with reinforcement (NHH metered and HH metered)~~
- ~~HV, LV Distributed generation with no reinforcement (NHH metered and HH metered)~~

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- ~~LV connected (NHH metered – SSEG[iii])~~

~~5.13These customers have been grouped based on the split of expected costs to be incurred by Electricity North West over the Distributed Generation Incentive period.~~

**Distributed Generation charging models and charges**

4.12 ~~A~~ Each Relevant EHV Distributed Generation customer will receive its own charging model.

~~3.14~~ The models deliver charges in pounds per kW per annum to be applied to EHV ~~number of models, based on the groups of Distributed Generation connections, will be maintained for the calculation of charges. The models will be:~~

~~☐EHV Distributed Generation – one model per EHV site~~

~~☐HV, LV Distributed Generation with reinforcement (NHH metered and HH metered) – one model for all qualifying sites~~

~~☐HV, LV Distributed Generation with no reinforcement (NHH metered and HH metered) – one model for all qualifying sites~~

~~☐LV Distributed Generation (NHH metered – SSEG) - one model for all qualifying sites~~

~~3.194~~.13 ~~From April 2008, only the EHV model(s) and the HV, LV models will be utilised. All EHV connected Relevant Distributed Generation sites will receive their own charging model and collectively will form the EHV customer group. HV, LV connected Relevant Distributed Generation sites with reinforcement will be captured in one model and form one of the HV/LV customer groups, the other one will be formed from HV, LV Relevant~~ Distributed Generation customers.~~sites without reinforcement.~~

~~5.15**As the type, size and number of Distributed Generation connected to our network increases, it is proposed to use the full range of models as detailed above.**~~

~~5.16**If however the proposed set of models does not provide an appropriate apportionment of costs, Electricity North West will amend the number and constitution of the models to reflect any changes in the penetration of Distributed Generation.**~~

~~5.17**Distribution Generation charges are published in Table 4.1 of Section 4 of our Licence Condition 14 document titled 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network'. 3 months notice will be given where any changes to charges are required.**~~

## Matching Distributed Generation charges to Distributed Generation Allowed Revenue

~~5.18~~As the charges for each Relevant EHV ~~lectricity North West shall set its Distributed~~ Distribution ~~Generation charges on an annual basis to recover and not to exceed the projected Distributed G~~Generation are generated using a charging methodology that mirrors the allowed revenue calculation for each Relevant Distribution Generation there

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is no revenue matching required.~~Allowed Revenue (adjusted for the previous year's under/ over-recovery and any allowed transfer of assets into the main distribution price control).~~

~~5.19~~4.14 ~~Where the projected income from setting Distributed Generation charges is expected to over-recover or under-recover the forecast Distributed Generation Allowed Revenue all the charges will be reduced or increased proportionately within the customer groups, subject to the following clause 5.20.~~

~~5.20It is recognised that due to the proposed structure of the Distributed Generation charging methodology, to be applied from April 2005, charges may vary over time.~~

~~In order to provide some stability and predictability of charges over the next Price Control it is proposed to minimise any disturbance by capping the change in nominal charges to plus or minus ten percent per annum (except where the current charge is zero~~

~~**Structure of Distributed Generation charges**~~

~~5.21The models deliver charges to be applied to Distributed Generation customers in the following manner:~~

- ~~EHV Distributed Generation (HH metered) pounds per kW per annum~~
- ~~HV, LV Distributed Generation with reinforcement (NHH metered and HH metered) pounds per kW per annum~~
- ~~HV, LV Distributed Generation with no reinforcement (NHH metered and HH metered) pounds per kW per annum~~
- ~~LV NHH – other~~
- ~~LV NHH – SSEG pounds per kW per annum~~

**Interruption Standard Payment**

~~5.22~~4.15 ~~Ofgem has proposed that~~ 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.

~~5.23The facility to receive the interruption payment for Distributed Generation customers connected at LV is covered by The Electricity (Standards of Performance) Regulations 2005.~~

~~5.24~~4.16 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 ~~HV and~~ EHV Distributed Generation customers that they have a firm (secure) connection to our distribution network.

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# 6.Use of System Charges

## Where our Use of System charges are published

6.1Electricity North West's Use of System charges are published in our Licence Condition 14 document titled 'Statement of Charges for Use of Electricity North West Limited's Electricity Distribution Network'. This statement is available free of charge from our web-site at Electricity North West Limited or alternatively a paper copy is available on request at a cost of £10 plus packing, postage and VAT by following up the contact details on page 6.

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## ~~7.~~5. Glossary of terms

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~~7.1~~5.1 The following definitions are included to aid understanding of this document.

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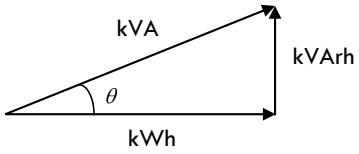
| Act | The Electricity Act 1989 as amended by Utilities Act 2000, the Sustainable Energy Act 2003 and the Energy Act 2004. |
| Annuity Factor | The annuity factor is calculated as RoR/(1-(1/(1+RoR)^40)where RoR is the Allowed Rate of Return. |
| ~~Authorised Electricity Operator~~ | ~~Persons entitled, by licence or by exemption under the Act, to use Electricity North West's distribution network to supply, distribute or generate electricity.~~ |
| ~~Authorised Supply Capacity (ASC)~~ | ~~The agreed maximum capacity measured in kilovoltampere you are allowed to take from the Distribution Network through your point of connection.~~ |
| Authority | The Gas and Electricity Markets Authority (GEMA) – the regulatory body for the gas and electricity industries established under section 1 of the Utilities Act 2000. |
| ~~BSC~~ | ~~Balancing and Settlements Code~~ |
| ~~Central Volume Allocation (CVA)~~ | ~~The determination of quantities of active energy to be taken into account for the purposes of Settlement in respect of Volume Allocation Units (e.g. GSP Group).~~ |
| Chargeable reactive power units | A reactive power charge is made for each kVArh consumed in excess of 33% of the number of units (kWh) consumed in each month. This represents a threshold value for power factor of 0.95, below which consumed reactive units are chargeable. The diagram below shows the calculation of power factor.<br>$Cos\theta = Power\ Factor$<br>  <br> |
| ~~CUSC~~ | ~~The Connection and Use of System Code governing connection to and use of NGET's transmission system~~ |
| ~~Customer With Own Generation (CwoG)~~ | ~~A customer who has own generation and which is capable of being paralleled to our Distribution Network.~~ |
| ~~Dataflow~~ | ~~A structured data format for the transfer of electronic information between registered parties.~~ |
| Designated EHV premises | Premises connected to assets on the licensee's Distribution System at a voltage level of 22 kilovolts or more. |
| Distributed Generation | A generator directly connected to Electricity North West's distribution network or directly connected to an independent or private network (not including the onshore interconnected networks) which in turn is connected to Electricity North West's distribution network. |
| ~~Distribution Code~~ | ~~The Distribution Code of the Distributors of England and Wales. It is the document produced by each Distributor in accordance with Condition 21 of its Licence and approved by Ofgem to define the technical aspects and planning criteria of the working relationship between the Distributor and all those connected to its Distribution~~ |

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| | ~~Network.~~ |
| Distribution Licence | The Electricity Distribution Licence granted to Electricity North West Limited pursuant to section 6(1) of the Act. |
| Distribution Use of System Agreement (DU~~u~~oSA) | The agreement between Electricity North West and an authorised electricity operator, which sets out the obligations of both parties for the use of Electricity North West's distribution network. |
| Distribution Use of System (DU~~u~~oS) | Use of system charges for demand and generation customers who are connected to and utilising Electricity North West's distribution network. |
| ~~Elexon~~ | ~~The Balancing and Settlements Company.~~ |
| Extra high voltage (EHV) | 22 kV or higher voltage~~. or 11 or 6.6 kV if supplied directly from a transformer with a primary voltage of 132 kV. The permitted tolerance at these voltages is plus and minus 6%.~~ |
| Generator Use of System (GDUoS) | Generator Distribution Use of System charge. |
| ~~Grid Code~~ | ~~The document produced by NGET in accordance with its transmission licence and approved by Ofgem to define the technical aspects and planning criteria of the working relationships between NGET and all those connected to its transmission system and including, in certain aspects Distributed Generators.~~ |
| ~~Grid Supply Point (GSP)~~ | ~~A grid supply point is connection point at which the NGET's transmission network system is connected to Electricity North West's distribution network.~~ |
| ~~HH~~ | ~~Half hourly~~ |
| High voltage (HV) | 6.6 kV or 11 kV ~~plus or minus 6%~~ measured between any two phase conductors. |
| Installed Generation Capacity | The capacity rating of the Distributed Generation plant. |
| kVAr | kilovoltampere reactive |
| kVA | kilovoltampere |
| kW | kilowatt |
| kWh | kilowatt hour |
| Licensed ~~Embedded Electricity~~ Distributio~~r~~ Network Operator | Refers to a licensed distribution network operator operating outside its distribution service area or a licensed independent distribution network operator. |
| LLFC | Line Loss Factor Class |
| Low voltage (LV) | 230 volt ~~plus 10% or minus 6%~~ measured between the neutral conductor and any phase conductor. |
| Maximum Import Capacity (MIC)~~MRA~~ | The agreed maximum import capacity measured in kilovoltampere you are allowed to take from the Distribution Network through your point of connection.~~Master Registration Agreement~~ |
| ~~MPAN~~ | ~~Meter Point Administration Number~~ |
| ~~MPAS~~ | ~~Meter Point Administration Service~~ |
| National Grid Electricity Transmission (NGET) | The company that owns and operates the transmission network in England and Wales. |
| Network | The whole of our interconnected distribution equipment, including cables, overhead lines and substations, which we operate in accordance with our licence. |
| ~~NHH~~ | ~~Non-half hourly~~ |

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| Ofgem | Ofgem is the Office of Gas and Electricity Markets that regulates the gas and electricity industries in Great Britain. Ofgem operates under the governance of the Gas and Electricity Authority (sometimes referred to as the Authority or GEMA) which sets all major decisions and policy priorities. |
| Operation and Maintenance (O&M) percentage | The percentage rate of Operation and Maintenance is calculated as the percentage of the operation and maintenance costs to the modern equivalent value of the distribution network assets. |
| Relevant Distributed Generation | Means an installation comprising any plant or apparatus for the production of electricity, which:<br>• Is directly connected to Electricity North West's distribution network or directly connected to an independent or private network (not including the onshore interconnected networks) which in turn is connected to Electricity North West's distribution network;<br>• has a connection start date on or after 1 April 2005;<br>• is eligible for use of system charges (if any) in accordance with the charging methodologies in place on or after 1 April 2005, but excluding generators who have paid deep connection charges and are exempt from use of system charges at least until 2010, by virtue of being pre-existing under the policy set out in Ofgem's "Structure of electricity distribution charges – initial decisions document, November 2003);<br>• An increase in capacity due to an upgrade or expansion after 1 April 2005 of a Distributed Generation plant, whether or nor existing before 1 April 2005, is regarded as a separate addition of Distributed Generation for the purpose of the Distributed Generation Incentive Scheme. Standby generators that operate in parallel with Electricity North West's distribution system for short periods of time for the purpose of testing only will not be included in this term. |
| Relevant Objectives | The relevant objectives, as defined in our Electricity Distribution Licence, are:<br>(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 this licence;<br>(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;<br>(c) 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; and<br>(d) That, so far as is consistent with sub-paragraph (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. |
| Retail Price Index (RPI) | The general index of retail prices published by the Office for National Statistics each month. |

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| Supplier | The company from whom you purchase electricity, or to whom you sell the exported electricity from your generation. |
| ~~Supplier Volume Allocation Agent (SVAA)~~ | ~~The BSC agent for Supplier Volume Allocation.~~ |
| ~~Supplier Volume Allocation (SVA)~~ | ~~The determination of quantities of active energy to be taken into account for the purposes of Settlement in respect of Supplier BM Units.~~ |
| ~~Supply Capacity~~ | ~~The largest amount of electricity, expressed in kilovoltampere, that we say can pass from our network to your equipment, or vice versa, at your premises.~~ |
| ~~500 MW Model~~ | ~~500 MW model has the capacity to cope with the simultaneous maximum demand of 500 MW throughout all levels of the system.~~ |

## Version Control

| Version | Date | Details | Author |
|---|---|---|---|
| ~~1.1~~ | ~~24 Sept. '04~~ | ~~Draft submission for Ofgem consultation~~ | ~~S M Brooke~~ |
| ~~1.2~~ | ~~26 Nov. '04~~ | ~~Final submission for Ofgem approval~~ | ~~S M Brooke~~ |
| ~~1.3~~ | ~~28 Jan. '05~~ | ~~Revisions reflecting comment from 'notice of decision' document~~ | ~~S M Brooke~~ |

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|---|---|---|---|
| ~~1.4~~ | ~~18 Feb. '05~~ | ~~Further revisions reflecting comments from 'notice of decision document and EHV demand transition consultation~~ | ~~S M Brooke~~ |
| ~~1.5~~ | ~~31 Mar. '05~~ | ~~Further revisions to EHV demand transition paragraph~~ | ~~S M Brooke~~ |
| ~~1.6~~ | ~~Dec. '05~~ | ~~Re-format the document (e.g. the font, word and title sizes) to align it with the other licence condition statements;~~<br>~~Update name and website changes, align the definitions within the Glossary of Terms in Section 7 with the other licence condition statements and include new definitions for appendix 1;~~<br>~~Re-draft the introduction of 'Section 5 – Charging Methodology – Generation Charges' to remove the references to application near to and after 1st April 2005; and~~<br>~~Include a new Appendix 1 describing United Utilities approach to the calculation of loss adjustment factors.~~ | ~~E J Rigby~~<br>~~E J Rigby~~<br>~~S M Brooke~~<br>~~S M Brooke~~ |
| ~~1.7~~ | ~~13 Mar. '06~~ | ~~Implemented a new reactive power methodology for the calculation of excess reactive unit charges and to re-align the threshold for the charging for excess reactive units (kVArh) consumed from 50% of number of active units (kWh) distributed (ie a power factor of 0.9) to 33% of number of active units distributed (ie a power factor of 0.95) to be consistent with the assumptions of the Distribution Reinforcement Model (commonly known as the 500MW model).~~ | ~~S M Brooke~~ |
| ~~1.8~~ | ~~Sep '07~~ | ~~Company name change, amended references to PLC to Limited~~ | ~~F Welsh/A Sherry~~ |
| ~~1.9~~ | ~~21 Jan '08~~ | ~~ENW/2008/004 - ENW/2008/010~~ | ~~F Welsh~~ |
| ~~1.10~~ | ~~13 Feb. '09~~ | ~~ENW/2009/003~~ | ~~S M Brooke~~ |
| ~~1.11~~ | ~~09 Apr '09~~ | ~~Deleted Appendix 1 which detailed ENW's loss adjustment factor methodology, as this has now been documented in a separate statement.~~ | ~~A Sherry~~ |

**Formatted:** German (Germany)

i As amended by the Utilities Act 2000, the Sustainable Energy Act 2003 and Energy Act 2004.

1~~i~~ See definition in the Glossary of Terms.

iii Where there is a mismatch between the total revenue expected to be collected by the draft charges and the forecast allowed revenue, the unit rate price component is scaled up or down.

iv For further information on the Interim Arrangements and Longer Term Framework refer to the Ofgem consultation paper tilted, "Structure of Electricity Distribution Charges – Update document and Licence Modifications" published in April 2004.

~~vi All values are indexed by RPI (July to December).~~

vii SSEG - a Small Scale Embedded Generator is a source of electrical energy rated up to and including 16 Ampere per phase, single or multiphase, 230/400 Volt ac.