



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

This statement is effective from 1st April 2012

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

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1. Introduction

- 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.
- 1.2 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' as defined in paragraph 3 of Condition 13.
- 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.
- 1.4 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.
- 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.

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2. Charging Boundary

- 2.1 Distribution Use of System Charges for customers are derived using a different methodology dependant on where the customer connects to the Electricity North West distribution network. The boundary between these charging methodologies is defined with the Distribution Licence.
- 2.2 To assist stakeholders a summary of the charging boundary is contained below. This summary is provided for information only and if stakeholders require further clarification of the charging boundary this is available in Condition 13A and Condition 50A of the Distribution Licence.
- 2.3 Electricity North West will apply the charging methodologies specified below to the following customers:

Common Distribution Charging Methodology (CDCM)

- 2.4 This charging methodology applies to Designated Properties as defined within Condition 13 of the Distribution Licence. This includes all LV and HV connected demand, generation and embedded networks except for the Import Charges for High Voltage Substation (HVS) customers. Under this definition, customers who were defined as HVS within the CDCM in the charging year 2011/12 will be charged from April 2012 as follows:
- HVS Import is charged under the EDCM methodology for import from April 2012.
 - HVS Export is charged under the CDCM methodology from April 2012
- 2.5 The application of the CDCM methodology is detailed in Section 3 of this document.

Extra High Voltage Distribution Charging Methodology for Import Charges (EDCM)

- 2.6 This charging methodology applies to the Import Charges for properties that are not defined as Designated Properties within Condition 13 of the

Distribution Licence. This includes the Import Charges for all EHV connected demand, generation and embedded networks including the Import Charges for High Voltage Substation (HVS) customers.

2.7 The application of the EDCM methodology for Import Charges is detailed in Section 4 of this document.

Extra High Voltage Distribution Charging Methodology for Export Charges

2.8 This charging methodology applies to the Export Charges for properties that are not defined as Designated Properties within Condition 13 of the Distribution Licence. This includes the Export Charges for all EHV connected demand, generation and embedded networks, but excluding the Import Charges for High Voltage Substation (HVS) customers.

2.9 The application of the Extra High Voltage Distribution Charging Methodology for Export Charges methodology is detailed in Section 5 of this document.

3. Common Distribution Charging Methodology (CDCM)

3.1 Charges for Designated Properties are set in accordance with the Common Distribution Charging Methodology.

3.2 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 the DCUSA website www.dcusa.co.uk

4. Use of System Charging Methodology – Extra High Voltage Import Charges

Introduction

- 4.1 Import Charges for Designated EHV Premises are set in accordance with the new Extra High Voltage Distribution Charging Methodology (EDCM) for import charges.
- 4.2 The EDCM for import charges is available for download from the ENA website using the following address: <http://energynetworks.squarespace.com/structure-of-charges-edcm/>. The methodology will also be available from the DCUSA website once it has been incorporated into DCUSA using the following address: <http://www.dcusa.co.uk>.

5. Use of System Charging Methodology – Extra High Voltage Export Charges

Introduction

- 5.1 This methodology will be valid from 1 April 2012 to calculate Export Charges for all Designated EHV premises, except pre-2005 connected Distribution Generation customers.
- 5.2 Pre-2005 connected Distributed Generation customers will continue to be exempt from export charges until such time as specified by industry arrangements.

Parties Liable for EHV Export Charges

- 5.3 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

- 5.4 The charges for Relevant 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 from 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 £1.50¹ per kW per annum of Installed Generation Capacity of the Distributed Generation plant.
- **Operation, Repair and Maintenance Charges** – A standard £1¹ 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 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 £200¹ 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.

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

Principles and basis of charges

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

5.8 Electricity North West does not recover either Business rates or NGET Connection or Use of System charges from Relevant EHV Distributed Generation customers.

5.9 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.

¹ All values are indexed by RPI (July to December).

5.10 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 Relevant EHV Distributed Generation customer will be charged at the level of his declared Installed Generation Capacity.

5.11 The Relevant EHV Distributed Generation will be expected to operate, within the band between 0.95 lagging and 0.95 leading power factor. If the Relevant EHV 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 HV Substation Generation, Non-intermittent customers within the CDCM.

Distributed Generation charging models and charges

5.12 The Export Charge for Relevant EHV Distributed Generation is derived using a model and the data used in the model will be made available to the customer at the customer's request.

5.13 The model delivers charges in pounds per kW per annum to be applied to Relevant EHV Distributed Generation customers.

Matching Distributed Generation charges to Distributed Generation Allowed Revenue

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

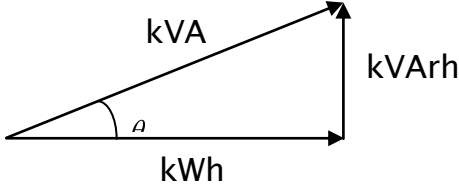
Interruption Standard Payment

5.15 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.

5.16 Electricity North West will offer a standard interruption payment, of 0.002 £/kWh for every whole hour without network availability (except for prearranged outages), to EHV Distributed Generation customers that have a firm (secure) connection to our distribution network. The firm connection must be confirmed in writing by Electricity North West as specified in the National Terms of Connection for this payment to apply.

6. Glossary of terms

6.1 The following definitions are included to aid understanding of this document.

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.
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.
Chargeable reactive power units	<p>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. $\cos \theta = \text{Power Factor}$</p> 

Designated Premises	As defined in Condition 13A of the Distribution Licence
Designated EHV premises	All premises that are not Designated Premises as defined in Condition 13A of the Distribution Licence
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 Licence	The Electricity Distribution Licence granted to Electricity North West Limited pursuant to section 6(1) of the Act.
Distribution Use of System Agreement (DUoSA)	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 (DUoS)	Use of system charges for demand and generation customers who are connected to and utilising Electricity North West's distribution network.
Export Charges	means Use of System Charges in relation to electricity generated and placed on a Distribution System.
Extra high voltage (EHV)	22 kV or higher voltage.
Generator Use of System (GDUoS)	Generator Distribution Use of System charge.
High voltage (HV)	Nominal voltages of at least 1kV and less than 22kV.
High Voltage Substation (HVS)	customers connected to the DNO Party's network at a voltage of at least 1 kV and less than 22 kV at a substation

	with a primary voltage (the highest operating voltage present at the substation) of at least 22 kV, where the current transformer used for the customer's settlement metering or for metering used in the calculation of the customer's Use of System Charges or credits is located at the substation.
High Voltage Substation Generation, Non-intermittent	The High Voltage Substation Generation, Non intermittent tariff that is calculated within the CDCM and published within the Electricity North West Use of System Charging Statement.
Import Charges	means Use of System Charges in relation to electricity supplied and taken from a Distribution System.
Installed Generation Capacity	The capacity rating of the Distributed Generation plant.
kVAr	kilovoltampere reactive
kVA	kilovoltampere
kW	kilowatt
kWh	kilowatt hour
Licensed Distribution 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)	Nominal voltages below 1kV
Maximum Import Capacity (MIC)	The agreed maximum import capacity measured in kilovoltampere you are allowed to take from the Distribution Network through your point of connection.

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.
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: <ul style="list-style-type: none"> • 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; • has a connection start date on or after 1 April 2005; • is eligible for use of system charges (if any) in accordance with the charging methodologies in place

	<p>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);</p> <ul style="list-style-type: none"> • 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.
<p>Relevant EHV Distributed Generation</p>	<ul style="list-style-type: none"> • All Relevant Distributed Generation that is also a Designated EHV Premises.
<p>Relevant Objectives</p>	<p>The relevant objectives, as defined in our Electricity Distribution Licence, are:</p> <p>(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;</p> <p>(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;</p> <p>(c) That compliance with the use of system charging methodology results in charges which reflect, as far as is</p>

	<p>reasonably practicable (taking account of implementation costs), the costs incurred by the licensee in its distribution business; and</p> <p>(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.</p>
Retail Price Index (RPI)	The general index of retail prices published by the Office for National Statistics each month.
Supplier	The company from whom you purchase electricity, or to whom you sell the exported electricity from your generation.

Version Control

Version	Date	Details	Author
3.0	02 Nov 11	Version 3.0 reflects the introduction of the EDCM for the import side of EHV customers from April 2012.	A Pace
2.0	18 Dec 09	Version 2.0 is a new methodology that reflects the introduction of CDCM and the interim EHV charging methodology as approved by Ofgem under modification proposal ENW-2009-005.2.	S Brooke/A Pace