



Northern Powergrid (Northeast) Ltd

Use of System Charging Statement

Notice of Charges

Effective from

1st April 2017

Version 2.0

Version Control

Version	Date	Description of version and any changes made
1.0	1 April 2017	This statement is based on version 0.3 of the common template developed during 2015.
1.0	1 April 2017	The form of this statement was approved by Ofgem on 17 February 2016. No changes to previous version.
2.0	1 April 2017	This statement has been revised to update Annex 5 based on the 2016 losses submission, and to add 2.30. to the 'Site-specific billed charges' section.

A change-marked version of this statement can be provided upon request.

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1. Introduction

- 1.1. This statement tells you about our charges and the reasons behind them. It has been prepared consistent with Standard Licence Condition 14 of our Electricity Distribution Licence. The main purpose of this statement is to provide our schedule of charges¹ for the use of our Distribution System and to provide the schedule of adjustment factors² that should be applied in Settlement to account for losses from the Distribution System. We have also included guidance notes in Appendix 2 to help improve your understanding of the charges we apply.
- 1.2. Within this statement we use terms such as 'Users' and 'Customers' as well as other terms which are identified with initial capitalisation. These terms are defined in the glossary.
- 1.3. The charges in this statement are calculated using the Common Distribution Charging Methodology (CDCM) for Low-Voltage and High-Voltage (LV and HV) Designated Properties and the Extra-High Voltage Distribution Charging Methodology (EDCM) for Designated Extra-High Voltage (EHV) Properties.
- 1.4. Separate charges are calculated depending on the characteristics of the connection and whether the use of the Distribution System is for demand or generation purposes. Where a generation connection is seen to support the Distribution System the charges will be negative and the Supplier will receive credits for exported energy.
- 1.5. The application of charges to a premise can usually be referenced using the Line Loss Factor Class (LLFC) contained in the charge tables. Further information on how to identify and calculate the charge that will apply for your premise is provided in the guidance notes in Appendix 2.
- 1.6. All charges in this statement are shown exclusive of VAT. Invoices will include VAT at the applicable rate.
- 1.7. The annexes that form part of this statement are also available in spreadsheet format. This spreadsheet contains supplementary information used for charging purposes and a simple model to assist you to calculate charges. This spreadsheet can be downloaded from:

<http://www.northernpowergrid.com/document-library/charges>

¹ Charges can be positive or negative.

² Also known as Loss Adjustment Factors or Line Loss Factors

Validity period

- 1.8. This charging statement is valid for services provided between the effective from date and the effective to date stated on the front of the statement. The statement remains valid between those dates until updated by a revised version.
- 1.9. When using this charging statement, care should be taken to ensure that the statement or statements covering the period that is of interest are used.
- 1.10. Notice of any revision to the statement will be provided to Users of our Distribution System. The latest statements can be downloaded from:

<http://www.northernpowergrid.com/document-library/charges>

Contact details

- 1.11. If you have any questions about this statement please contact us at this address:

Charges Manager

Northern Powergrid

98 Aketon Road

Castleford

WF10 5DS

e-mail:- UoS.Charges@northernpowergrid.com

- 1.12. All enquiries regarding connection agreements and changes to maximum capacities should be addressed to:

Connection Record Maintenance

Northern Powergrid

Manor House

Station Road

New Penshaw

Houghton-le-Spring

DH4 7LA

e-mail:- connection.records@northernpowergrid.com

2. Charge application and definitions

- 2.1. The following section details how the charges in this statement are applied and billed to Users of our Distribution System.
- 2.2. We utilise two billing approaches depending on the type of metering data received. The 'Supercustomer' approach is used for Non-Half-Hourly (NHH) metered, NHH unmetered or aggregated Half-Hourly (HH) metered premises and the 'Site-specific' approach is used for HH metered or pseudo HH unmetered premises.
- 2.3. Typically NHH metered are domestic and small businesses, HH metered are larger businesses and unmetered premises are normally streetlights.

Supercustomer billing and payment

- 2.4. Supercustomer billing and payment applies to Metering Points registered as NHH metered, NHH unmetered or aggregated HH metered. The Supercustomer approach makes use of aggregated data obtained from Suppliers using the 'Aggregated DUoS Report' data flow.
- 2.5. Invoices are calculated on a periodic basis and sent to each User, for whom we transport electricity through our distribution system. Invoices are reconciled, over a period of approximately 14 months to reflect later and more accurate consumption figures.
- 2.6. The charges are applied on the basis of the LLFC assigned to the Metering Point Administration Number (MPAN), and the units consumed within the time periods specified in this statement. All LLFCs are assigned at our sole discretion.

Supercustomer charges

- 2.7. Supercustomer charges include the following components:
 - a fixed charge - pence/MPAN/day, there will only be one fixed charge applied to each MPAN; and
 - unit charges - pence/kilowatt-hour (kWh), more than one kWh charge may apply depending on the type of tariff for which the MPAN is registered.
- 2.8. Users who wish to supply electricity to a Customer whose metering system is:
 - Measurement Class A or B, and settled on Profile Classes (PC) 1 through to 8; or
 - Measurement Class F or G;will be allocated the relevant charge structure set out in Annex 1.

- 2.9. Measurement class A charges apply to Exit/Entry Points where NHH metering is used for Settlement.
- 2.10. Measurement class B charges apply to Exit Points deemed to be suitable as Unmetered Supplies as permitted in the Electricity (Unmetered Supply) Regulations 2001³ and where operated in accordance with Balancing and Settlement Code (BSC) procedure 520⁴.
- 2.11. Measurement Class F and G charges apply to Exit/Entry Points where HH aggregated metering data is used for Settlement.
- 2.12. Identification of the appropriate charge can be made by cross reference to the LLFC.
- 2.13. Valid settlement PC/Standard Settlement Combination (SSC)/Meter Timeswitch Code (MTC) combinations for these LLFCs where the Metering System is Measurement Class A and B are detailed in Market Domain Data (MDD).
- 2.14. Where an MPAN has an invalid Settlement combination, the 'Domestic Unrestricted' fixed and unit charge will be applied as default until the invalid combination is corrected. Where there are multiple SSC/Time Pattern Regime (TPR) combinations, the default 'Domestic Unrestricted' fixed and unit charge will be applied for each invalid TPR combination.
- 2.15. The time periods for unit charges where the Metering System is Measurement Class A and B are as specified by the SSC. To determine the appropriate charge rate for each SSC/TPR a look-up table is provided in the spreadsheet that accompanies this statement⁵.
- 2.16. The time periods for unit charges where the Metering System is Measurement Class F and G are set out in the table 'Time Bands for Half Hourly Metered Properties' in Annex 1.
- 2.17. The 'Domestic Off-Peak' and 'Small Non-Domestic Off-Peak' charges are supplementary to either an unrestricted or a two-rate charge.

Site-specific billing and payment

- 2.18. Site-specific billing and payment applies to Measurement Class C, D and E metering points settled as HH metered. The site-specific billing and payment approach to Use of System (UoS) billing makes use of HH metering data at premise level received through Settlement.

³ The Electricity (Unmetered Supply) Regulations 2001 available from <http://www.legislation.gov.uk/ukxi/2001/3263/made>

⁴ Balancing and Settlement Code Procedures on unmetered supplies are available from <https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/>

⁵ [Northern Powergrid (Northeast) - Schedule of Charges and Other Tables Final 2017-18

- 2.19. Invoices are calculated on a periodic basis and sent to each User, for whom we transport electricity through its Distribution System. Where an account is based on estimated data, the account shall be subject to any adjustment which may be necessary following the receipt of actual data from the User.
- 2.20. The charges are applied on the basis of the LLFC assigned to the MPAN (or the Meter System Identifier (MSID) for Central Volume Allocation (CVA) sites), and the units consumed within the time periods specified in this statement.
- 2.21. All LLFCs are assigned at our sole discretion. Where an incorrectly applied LLFC is identified, we may at our sole discretion apply the correct LLFC and/or charges. Where MPANs have not been associated, for example when multiple points of connection fed from different sources are used for a single site, the relevant number of fixed charges will be applied.

Site-specific billed charges

- 2.22. Site-specific billed charges may include the following components:
- a fixed charge, pence/MPAN/day or pence/MSID/day;
 - a capacity charge, pence/kVA/day, for Maximum Import Capacity (MIC) and/or Maximum Export Capacity (MEC);
 - an excess capacity charge, pence/kVA/day, if a site exceeds its MIC and/or MEC;
 - unit charges, pence/kWh, more than one unit charge may be applied; and
 - an excess reactive power charge, pence/kVArh, for each unit in excess of the reactive charge threshold.
- 2.23. Users who wish to supply electricity to customers whose metering system is Measurement Class C, D, E or CVA will be allocated the relevant charge structure dependent upon the voltage and location of the metering point.
- 2.24. Measurement Class C, E or CVA charges apply to Exit/Entry points where HH metering, or an equivalent meter, is used for Settlement purposes.
- 2.25. Measurement class D charges apply to Exit points deemed to be suitable as Unmetered Supplies as permitted in the Electricity (Unmetered Supply) Regulations 2001⁶ and where operated in accordance with BSC procedure 520⁷.
- 2.26. Fixed charges are generally levied on a pence per MPAN/MSID basis. Where two or more HH MPANs/MSIDs are located at the same point of connection (as identified in

⁶ The Electricity (Unmetered Supply) Regulations 2001 available from <http://www.legislation.gov.uk/uksi/2001/3263/made>

⁷ Balancing and Settlement Code Procedures on unmetered supplies and available from <https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/>

- the connection agreement), with the same LLFC, and registered to the same supplier, only one daily fixed charge will be applied.
- 2.27. LV and HV Designated Properties will be charged in accordance with the CDCM and allocated the relevant charge structure set out in Annex 1.
 - 2.28. Designated EHV Properties will be charged in accordance with the EDCM and allocated the relevant charge structure set out in Annex 2.
 - 2.29. Where LV and HV Designated Properties or Designated EHV Properties have more than one point of connection (as identified in the connection agreement) then separate charges will be applied to each point of connection.
 - 2.30. Due to the seasonal nature of charges for Unmetered Supplies, changes between Measurement Class B and D (or vice versa) shall not be agreed except with effect from 1 April in any charging year.

Time periods for half-hourly metered properties

- 2.31. The time periods for the application of unit charges to LV and HV Designated Properties that are HH metered are detailed in Annex 1. We have not issued a notice to change the time bands.
- 2.32. The time periods for the application of unit charges to Designated EHV Properties are detailed in Annex 2. We have not issued a notice to change the time bands.

Time periods for pseudo half-hourly unmetered properties

- 2.33. The time periods for the application of unit charges to connections that are pseudo HH metered are detailed in Annex 1. We have not issued a notice to change the time bands.

Application of capacity charges

- 2.34. The following sections explain the application of capacity charges and exceeded capacity charges.

Chargeable capacity

- 2.35. The chargeable capacity is, for each billing period, the MIC/MEC, as detailed below.
- 2.36. The MIC/MEC will be agreed with us at the time of connection or pursuant to a later change in requirements. Following such an agreement (be it at the time of connection or later) no reduction in MIC/MEC will be allowed for a 12 month period.
- 2.37. Reductions to the MIC/MEC may only be permitted once in a 12 month period. Where MIC/MEC is reduced, the new lower level will be agreed with reference to the level of the customer's maximum demand. The new MIC/MEC will be applied from the start of the next billing period after the date that the request was received. It should be

noted that, where a new lower level is agreed, the original capacity may not be available in the future without the need for network reinforcement and associated charges.

- 2.38. In the absence of an agreement, the chargeable capacity, save for error or omission, will be based on the last MIC and/or MEC previously agreed by us for the relevant premise's connection. A customer can seek to agree or vary the MIC and/or MEC by contacting us using the contact details in section 1.

Exceeded capacity

- 2.39. Where a customer takes additional, unauthorised capacity over and above the MIC/MEC, the excess will be classed as exceeded capacity. The exceeded portion of the capacity will be charged at the excess capacity charge p/kVA/day rate, based on the difference between the MIC/MEC and the actual capacity used. This will be charged for the full duration of the month in which the breach occurs.

Demand exceeded capacity

$$\text{Demand Exceeded Capacity} = \max\left(2 \times \sqrt{\text{AI}^2 + \max(\text{RI}, \text{RE})^2} - \text{MIC}, 0\right)$$

Where:

AI = Active import (kWh)

RI = Reactive import (kVArh)

RE = Reactive export (kVArh)

MIC = Maximum import capacity (kVA)

- 2.40. Only reactive import and reactive export values occurring at times of active import are used in the calculation. Where data for two or more MPANs is aggregated for billing purposes the HH consumption values are summated prior to the calculation above.
- 2.41. This calculation is completed for every half hour and the maximum value from the billing period is applied.

Generation exceeded capacity

$$\text{Generation Exceeded Capacity} = \max\left(2 \times \sqrt{\text{AE}^2 + \max(\text{RI}, \text{RE})^2} - \text{MEC}, 0\right)$$

Where:

AE = Active export (kWh)

RI = Reactive import (kVArh)

RE = Reactive export (kVArh)

MEC = Maximum export capacity (kVA)

- 2.42. Only reactive import and reactive export values occurring at times of active export are used in the calculation. Where data for two or more MPANs is aggregated for billing purposes the HH consumption values occurring at times of kWh export are summated prior to the calculation above.
- 2.43. This calculation is completed for every half hour and the maximum value from the billing period is applied.

Standby capacity for additional security on site

- 2.44. Where standby capacity charges are applied, the charge will be set at the same rate as that applied to normal MIC. Where, at the customer's request, for additional security of supplies requiring sterilisation of capacity at two different sources of supply, we reserve the right to charge for the capacity held at each source.

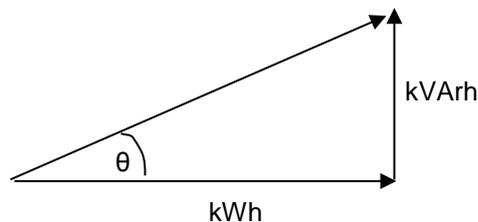
Minimum capacity levels

- 2.45. There is no minimum capacity threshold.

Application of charges for excess reactive power

- 2.46. When an individual HH metered MPAN's reactive power (measured in kVArh) at LV and HV Designated Properties exceeds 33% of total active power (measured in kWh), excess reactive power charges will apply. This threshold is equivalent to an average power factor of 0.95 during the period. Any reactive units in excess of the 33% threshold are charged at the rate appropriate to the particular charge.
- 2.47. Power Factor is calculated as follows:

$\cos \theta = \text{Power Factor}$



- 2.48. The chargeable reactive power is calculated as follows:

Demand chargeable reactive power

$$\text{Demand Chargeable kVArh} = \max \left(\max(\text{RI}, \text{RE}) - \left(\sqrt{\frac{1}{0.95^2} - 1} \times \text{AI} \right), 0 \right)$$

Where:

AI = Active import (kWh)

RI = Reactive import (kVAh)

RE = Reactive export (kVAh)

- 2.49. Only reactive import and reactive export values occurring at times of active import are used in the calculation. Where data for two or more MPANs is aggregated for billing purposes the HH consumption values are summated prior to the calculation above.
- 2.50. The square root calculation will be to two decimal places.
- 2.51. This calculation is completed for every half hour and the values summated over the billing period.

Generation chargeable reactive power

$$\text{Generation Chargeable kVAh} = \max\left(\max(\text{RI}, \text{RE}) - \left(\sqrt{\frac{1}{0.95^2} - 1} \times \text{AE}\right), 0\right)$$

Where:

AE = Active export (kWh)

RI = Reactive import (kVAh)

RE = Reactive export (kVAh)

- 2.52. Only reactive import and reactive export values occurring at times of active export are used in the calculation. Where data for two or more MPANs is aggregated for billing purposes the HH consumption values are summated prior to the calculation above.
- 2.53. The square root calculation will be to two decimal places.
- 2.54. This calculation is completed for every half hour and the values summated over the billing period.

Incorrectly allocated charges

- 2.55. It is our responsibility to apply the correct charges to each MPAN/MSID. The allocation of charges is based on the voltage of connection and metering information. We are responsible for deciding the voltage of connection while the Supplier determines and provides the metering information.
- 2.56. Generally, the voltage of connection is determined by where the metering is located and where responsibility for the electrical equipment transfers from us to the

- connected customer. This is normally established when the MPAN/MSID is created and will include information about whether the MPAN/MSID is for import or export purposes. Where an MPAN/MSID is used for export purposes the type of generation (intermittent or non-intermittent) will also be determined.
- 2.57. The Supplier provides us with metering information which enables us to allocate charges where there is more than one charge per voltage level. This metering data is likely to change over time if, for example, a Supplier changes from a two rate meter to a single rate meter. When this happens we will change the allocation of charges accordingly.
- 2.58. Where it has been identified that a LLFC/charge is likely to be incorrectly allocated due to the wrong voltage of connection (incorrect import/export details or an incorrectly noted metering location), then a correction request should be made to us. Requests from persons other than the current Supplier must be accompanied by a Letter of Authority from the Customer; the existing Supplier must also acknowledge that they are aware that a correction request has been made. Any request must be supported by an explanation of why it is believed that the current charge is wrongly applied along with supporting information, including, where appropriate photographs of metering positions or system diagrams. Any request to correct the current LLFC/charge that also includes a request to backdate the correction must include justification as to why it is considered appropriate to backdate the change.
- 2.59. If it has been identified that a charge has been incorrectly allocated due to the metering data then a correction request should be made to the Supplier.
- 2.60. Where we agree that an MPAN/MSID has been assigned incorrectly to the wrong voltage level then we will correct it by allocating the correct set of charges for that voltage level. Any adjustment for incorrectly applied charges will be as follows:
- Any credit or additional charge will be issued to the Supplier(s) who was effective during the period of the change.
 - The correction will be applied from the date of the request, back to the date of the incorrect allocation or, up to the maximum period specified by the Limitation Act (1980), in England and Wales, which covers a six year period; whichever is the shorter.
- 2.61. Should we reject the request, a justification will be provided to the requesting Party.
- 2.62. We shall not unreasonably withhold or delay any agreement to correct the charges applied and would expect to reach agreement within three months from the date of request.

Generation charges for pre-2005 Designated EHV Properties

2.63. Designated EHV Properties that were connected to the distribution system under a pre-2005 connection charging policy are eligible for exemption from UoS charges for generation unless one of the following criteria has been met:

- 25 years have passed since their first energisation/connection date (i.e. Designated EHV Properties with energisation/connection agreements dated prior to 1st April 2005, and for which 25 years has passed since their first energisation/connection date will receive generation UoS charges from the next charging year following the expiry of their 25 years exemption, starting 1st April), or
- the person responsible for the Designated EHV Property has provided notice to Northern Powergrid that they wish to opt in to generation UoS charges.

If a notice to opt in has been provided there will be no further opportunity to opt out.

2.64. Furthermore, if an exempt customer makes an alteration to its export requirement then the customer may be eligible to be charged for the additional capacity required or energy imported or exported. For example, where a generator increases its export capacity the incremental increase in export capacity will attract UoS charges as other non-exempt generators.

Provision of billing data

2.65. Where HH metering data is required for UoS charging and this is not provided in accordance with the BSC or the Distribution Connection and Use of System Agreement (DCUSA) through settlement processes, such metering data shall be provided by the User of the system in respect of each calendar month within five working days of the end of that calendar month.

2.66. The metering data shall identify the amount consumed and/or produced in each half hour of each day and shall separately identify active and reactive import and export. Metering data provided to us shall be consistent with that received through the metering equipment installed.

2.67. Metering data shall be provided in an electronic format specified by us from time to time, and in the absence of such specification, metering data shall be provided in a comma-separated text file in the format of Master Registration Agreement (MRA) data flow D0036 (as agreed with us). The data shall be e-mailed to:

Duos.billing@northernpowergrid.com

- 2.68. We require details of reactive power imported or exported to be provided for all Measurement Class C and E sites. It is also required for CVA sites and Exempt Distribution Network boundaries with difference metering. We reserve the right to levy a charge on Users who fail to provide such reactive data. In order to estimate missing reactive data, a power factor of 0.95 lag will be applied to the active consumption in any half hour.

Out of area use of system charges

- 2.69. We do not operate networks outside our Distribution Service Area.

Licensed distributor network operator charges

- 2.70. Licenced Distribution Network Operator (LDNO) charges are applied to LDNOs who operate Embedded Networks within our Distribution Services Area.
- 2.71. The charge structure for LV and HV Designated Properties embedded in networks operated by LDNOs will mirror the structure of the 'All-the-way' charge and is dependent upon the voltage of connection of each embedded network to the host DNO's network. The same charge elements will apply as those that match the LDNO's end customer charges. The relevant charge structures are set out in Annex 4.
- 2.72. Where an MPAN has an invalid settlement combination, the 'LDNO HV: Domestic Unrestricted' fixed and unit charge will be applied as default until the invalid combination is corrected. Where there are multiple SSC/TPR combinations, the default 'LDNO HV: Domestic Unrestricted' fixed and unit charge will be applied for each invalid TPR combination.
- 2.73. The charge structure for Designated EHV Properties embedded in networks operated by LDNOs will be calculated individually using the EDCM. The relevant charge structures are set out in Annex 2.
- 2.74. For Nested Networks the relevant charging principles set out in DCUSA Schedule 21 will apply. <http://www.dcusa.co.uk/SitePages/Documents/DCUSA-Document.aspx>

Licence exempt distribution networks

- 2.75. The Electricity and Gas (Internal Market) Regulations 2011 introduced new obligations on owners of licence exempt distribution networks (sometimes called private networks) including a duty to facilitate access to electricity and gas suppliers for customers within those networks.
- 2.76. When customers (both domestic and commercial) are located within a licence exempt distribution network and require the ability to choose their own supplier this is called 'third party access'. These embedded customers will require an MPAN so that they can have their electricity supplied by a Supplier of their choice.

2.77. Licence exempt distribution network owners can provide third party access using either full settlement metering or the difference metering approach.

Full settlement metering

2.78. This is where a licence exempt distribution network is set up so that each embedded installation has an MPAN and Metering System and therefore all customers purchase electricity from their chosen Supplier. In this case there are no Settlement Metering Systems at the boundary between the licensed Distribution System and the exempt distribution network.

2.79. In this approach our UoS charges will be applied to each MPAN.

Difference metering

2.80. This is where one or more, but not all, customers on a licence exempt distribution network choose their own Supplier for electricity supply to their premise. Under this approach the customers requiring third party access on the exempt distribution network will have their own MPAN and must have a HH Metering System.

2.81. Unless agreed otherwise, our UoS charges will be applied using gross settlement.

Gross settlement

2.82. Where one of our MPANs (prefix 15) is embedded within a licence exempt distribution network connected to our Distribution Systems, and a dispensation for difference metering is in place for settlement purposes, and we receive gross measurement data for the boundary MPAN, we will continue to charge the boundary MPAN Supplier for use of our Distribution System. No charges will be levied by us directly to the Customer or Supplier of the embedded MPAN(s) connected within the licence exempt distribution network.

2.83. We require that gross metered data for the boundary of the connection is provided to us. Until a new industry data flow is introduced for the sending of such gross data, gross metered data shall:

- be provided in a text file in the format of the D0036 MRA data flow;
- the text file shall be emailed to Duos.billing@northernpowergrid.com;
- the title of the email should also contain the phrase "gross data for difference metered private network".
- the text file and the title of the email shall contain the metering reference specified by us in place of the Settlement MPAN, i.e. a dummy alphanumeric reference to enable the relating of the gross metered data to a given boundary MPAN; and

- the text filename shall be formed of the metering reference specified by us followed by a hyphen and followed by a timestamp in the format YYYYMMDDHHMMSS and followed by “.txt”.

2.84. For the avoidance of doubt, the reduced difference metered measurement data for the boundary connection that is to enter Settlement should continue to be sent using the Settlement MPAN.

3. Schedule of charges for use of the Distribution System

- 3.1. Tables listing the charges for the distribution of electricity for UoS are published in annexes to this document.
- 3.2. These charges are also listed in a spreadsheet which is published with this statement and can be downloaded from:

<http://www.northernpowergrid.com/document-library/charges>
- 3.3. Annex 1 contains charges applied to LV and HV Designated Properties.
- 3.4. Annex 2 contains the charges applied to Designated EHV Properties and charges applied to LDNOs with Designated EHV Properties connected within their embedded Distribution System.
- 3.5. Annex 3 contains details of any preserved and additional charges that are valid at this time. Preserved charges are mapped to an appropriate charge and are closed to new customers.
- 3.6. Annex 4 contains the charges applied to LDNOs in respect of LV and HV Designated Properties connected in their embedded Distribution System.

4. Schedule of line loss factors

Role of line loss factors in the supply of electricity

- 4.1. Electricity entering or exiting our Distribution System is adjusted to take account of energy that is lost⁸ as it is distributed through the network. This adjustment does not affect distribution charges but is used in energy settlement to take metered consumption to a notional grid supply point so that suppliers' purchases take account of the energy lost on the Distribution System.
- 4.2. We are responsible for calculating the Line Loss Factors (LLFs) and providing these to Elexon. Elexon is the company that manages the BSC. The code covers the governance and rules for the balancing and settlement arrangements.
- 4.3. LLFs are used to adjust the metering system volumes to take account of losses on the distribution network.

Calculation of line loss factors

- 4.4. LLFs are calculated in accordance with BSC procedure 128. BSCP 128 sets out the procedures and principles by which our LLF methodology must comply. It also defines the procedure and timetable by which LLFs are reviewed and submitted.
- 4.5. LLFs are calculated for a set number of time periods during the year, using either a generic method or a site-specific method. The generic method is used for sites connected at LV or HV and the site-specific method is used for sites connected at EHV or where a request for site-specific LLFs has been agreed. Generic LLFs will be applied as a default to all new EHV sites until sufficient data is available for a site-specific calculation.
- 4.6. The definition of EHV used for LLF purposes differs from the definition used for defining Designated EHV Properties in the EDCM. The definition used for LLF purposes can be found in our LLF methodology.
- 4.7. The Elexon website (<http://www.elexon.co.uk/reference/technical-operations/losses/>) contains more information on LLFs. This page also has links to BSCP 128 and to our LLF methodology.

Publication of Line loss factors

- 4.8. The LLFs used in Settlement are published on the Elexon portal website, www.elexonportal.co.uk. The website contains the LLFs in standard industry data

⁸ Energy can be lost for technical and non-technical reasons and losses normally occur by heat dissipation through power flowing in conductors and transformers. Losses can also reduce if a customer's action reduces power flowing in the distribution network. This might happen when a customer generates electricity and the produced energy is consumed locally.

formats and in a summary form. A user guide with details on registering and using the portal is also available.

- 4.9. The BSCP128 sets out the timetable by which LLFs are submitted and audited. The submission and audit occurs between September and December in the year prior to the LLFs becoming effective. Only after the completion of the audit at the end of December and BSC approval are the final LLFs published.
- 4.10. Illustrative LLFs based on the latest LLFs are provided in Annex 5 of this statement. These illustrative LLFs are provided with reference to the metered voltage or associated LLFC for generic LLFs and by reference to the LLFCs for site specific LLFs. Each LLF is applicable to a defined time period.
- 4.11. As this charging statement is published a complete year before the LLFs have been published it is important to note that the LLFs provided in this statement are for illustration only and may be revised during the BSCP128 process.

5. Notes for Designated EHV Properties

EDCM nodal costs

- 5.1. A table is provided in the accompanying spreadsheet which shows the underlying Long Run Incremental Cost (LRIC) nodal costs used to calculate the current EDCM charges. This spreadsheet is available to download from our website:

<http://www.northernpowergrid.com/document-library/charges>

- 5.2. These are illustrative of the modelled costs at the time that this statement was published. A new connection will result in changes to current network utilisations which will then form the basis of future prices, the charge determined in this statement will not necessarily be the charge in subsequent years because of the interaction between new and existing network connections and any other changes made to our Distribution System which may affect charges.

Charges for new Designated EHV Properties

- 5.3. Charges for any new Designated EHV Properties calculated after publication of the current statement will be published in an addendum to that statement as and when necessary.
- 5.4. The form of the addendum is detailed in Annex 6 of this statement.
- 5.5. The addendum will be sent to relevant DCUSA parties and published as a revised "Schedule of Charges and other tables" spreadsheet on our website. The addendum will include charge information that under enduring circumstances would be found in Annex 2 and line loss factors that would normally be found in Annex 5.
- 5.6. The new Designated EHV Properties charges will be added to Annex 2 in the next full statement released.

Charges for amended Designated EHV Properties

- 5.7. Where an existing Designated EHV Property is modified and energised in the charging year, we may revise its EDCM charges for the modified Designated EHV Property. If revised charges are appropriate, an addendum will be sent to relevant DCUSA parties and published as a revised 'Schedule of charges and other tables' spreadsheet on our website. The modified Designated EHV property charges will be added to Annex 2 in the next full statement released.

Demand side management

- 5.8. For those premises where use of system is charged under the EDCM, some customers may be able to benefit from entering into a Demand Side Management (DSM) agreement with us.

- 5.9. DSM arrangements are based on a formal commitment by the customer to materially reduce their MIC in certain time periods, as determined by us, for active network management purposes other than normal planned or unplanned outages.
- 5.10. For new connections the customer must make an express statement in their application that they have an interest in some, or all, of the import capacity for their intended connection or modified connection being interruptible for active network management purposes.
- 5.11. Where the customer enters into a DSM agreement by agreeing to reduce their MIC to meet the defined parameters in the agreement, reduced use of system charges will apply. The chargeable capacity will be equal to the MIC minus the capacity that is subject to restrictions under the DSM agreement. The scale of the reduction will vary by site and is linked to the LRIC element of the charge in line with the approved charging methodology.
- 5.12. Any reduction in use of system charges applicable to the customer will be assessed on a site-specific basis by us. Any customers who wish to enquire whether they can take advantage of DSM should in the first instance contact:

Connection Record Maintenance

Manor House

Station Road

New Penshaw

Houghton-le-Spring

DH4 7LA

e-mail:- connection.records@northernpowergrid.com

6. Electricity distribution rebates

- 6.1. We have neither given nor announced any DUoS rebates to Users in the 12 months preceding the date of publication of this revision of the statement.

7. Accounting and administration services

- 7.1. We reserve the right to impose payment default remedies. The remedies are as set out in DCUSA where applicable or else as detailed in the following paragraph.
- 7.2. If any invoices that are not subject to a valid dispute remain unpaid on the due date, late payment interest (calculated at base rate plus 8%) and administration charges may be imposed.
- 7.3. Our administration charges are detailed in the following table. These charges are set at a level which is in line with the Late Payment of Commercial Debts Act;

Size of Unpaid Debt	Late Payment Fee
Up to £999.99	£40.00
£1,000 to £9,999.99	£70.00
£10,000 or more	£100.00

8. Charges for electrical plant provided ancillary to the grant of Use of System

8.1. Northern Powergrid has no charges applicable to this section.

Appendix 1 - Glossary of Terms

1.1. The following definitions, which can extend to grammatical variations and cognate expressions, are included to aid understanding:

Term	Definition
All-the-way charge	A charge that is applicable to an end user rather than an LDNO. An end user in this context is a Supplier/User who has a registered MPAN or MSID and is using the Distribution System to transport energy on behalf of a Customer.
Balancing and Settlement Code (BSC)	The BSC contains the governance arrangements for electricity balancing and settlement in Great Britain. An overview document is available from: www.elexon.co.uk/ELEXON/Documents/trading_arrangements.pdf .
Common Distribution Charging Methodology (CDCM)	The CDCM used for calculating charges to Designated Properties as required by standard licence condition 13A of the electricity distribution licence.
Central volume allocation (CVA)	As defined in the BSC.
Customer	A person to whom a User proposes to supply, or for the time being supplies, electricity through an exit point, or from whom, a user or any relevant exempt supplier, is entitled to recover charges, compensation or an account of profits in respect of electricity supplied through an exit point; Or A person from whom a User purchases, or proposes to purchase, electricity, at an entry point (who may from time to time be supplied with electricity as a customer of that user (or another electricity supplier) through an exit point).
Designated EHV Properties	As defined in standard condition 13A of the electricity distribution licence.
Designated Properties	As defined in standard condition 13A of the electricity distribution licence.
Distribution Connection and Use of System Agreement (DCUSA)	The DCUSA is a multi-party contract between the licensed electricity distributors, suppliers, generators and Offshore Transmission Owners (OFTOs) of Great Britain. It is a requirement that all licensed electricity distributors and suppliers become parties to the DCUSA.

Term	Definition																																																												
Distributor IDs	<p>These are unique IDs that can be used, with reference to the MPAN, to identify your LDNO. The charges for other network operators can be found on their website.</p> <table border="1" data-bbox="643 405 1382 1480"> <thead> <tr> <th data-bbox="649 405 715 465">ID</th> <th data-bbox="715 405 1002 465">Distribution Service Area</th> <th data-bbox="1002 405 1375 465">Company</th> </tr> </thead> <tbody> <tr> <td data-bbox="649 465 715 506">10</td> <td data-bbox="715 465 1002 506">East of England</td> <td data-bbox="1002 465 1375 506">UK Power Networks</td> </tr> <tr> <td data-bbox="649 506 715 546">11</td> <td data-bbox="715 506 1002 546">East Midlands</td> <td data-bbox="1002 506 1375 546">Western Power Distribution</td> </tr> <tr> <td data-bbox="649 546 715 586">12</td> <td data-bbox="715 546 1002 586">London</td> <td data-bbox="1002 546 1375 586">UK Power Networks</td> </tr> <tr> <td data-bbox="649 586 715 656">13</td> <td data-bbox="715 586 1002 656">Merseyside and North Wales</td> <td data-bbox="1002 586 1375 656">Scottish Power</td> </tr> <tr> <td data-bbox="649 656 715 696">14</td> <td data-bbox="715 656 1002 696">Midlands</td> <td data-bbox="1002 656 1375 696">Western Power Distribution</td> </tr> <tr> <td data-bbox="649 696 715 736">15</td> <td data-bbox="715 696 1002 736">Northern</td> <td data-bbox="1002 696 1375 736">Northern Powergrid</td> </tr> <tr> <td data-bbox="649 736 715 777">16</td> <td data-bbox="715 736 1002 777">North Western</td> <td data-bbox="1002 736 1375 777">Electricity North West</td> </tr> <tr> <td data-bbox="649 777 715 902">17</td> <td data-bbox="715 777 1002 902">Scottish Hydro Electric (and embedded networks in other areas)</td> <td data-bbox="1002 777 1375 902">Scottish Hydro Electric Power Distribution plc</td> </tr> <tr> <td data-bbox="649 902 715 943">18</td> <td data-bbox="715 902 1002 943">South Scotland</td> <td data-bbox="1002 902 1375 943">Scottish Power</td> </tr> <tr> <td data-bbox="649 943 715 983">19</td> <td data-bbox="715 943 1002 983">South East England</td> <td data-bbox="1002 943 1375 983">UK Power Networks</td> </tr> <tr> <td data-bbox="649 983 715 1108">20</td> <td data-bbox="715 983 1002 1108">Southern Electric (and embedded networks in other areas)</td> <td data-bbox="1002 983 1375 1108">Southern Electric Power Distribution plc</td> </tr> <tr> <td data-bbox="649 1108 715 1149">21</td> <td data-bbox="715 1108 1002 1149">South Wales</td> <td data-bbox="1002 1108 1375 1149">Western Power Distribution</td> </tr> <tr> <td data-bbox="649 1149 715 1189">22</td> <td data-bbox="715 1149 1002 1189">South Western</td> <td data-bbox="1002 1149 1375 1189">Western Power Distribution</td> </tr> <tr> <td data-bbox="649 1189 715 1229">23</td> <td data-bbox="715 1189 1002 1229">Yorkshire</td> <td data-bbox="1002 1189 1375 1229">Northern Powergrid</td> </tr> <tr> <td data-bbox="649 1229 715 1292">24</td> <td data-bbox="715 1229 1002 1292">All</td> <td data-bbox="1002 1229 1375 1292">Independent Power Networks</td> </tr> <tr> <td data-bbox="649 1292 715 1332">25</td> <td data-bbox="715 1292 1002 1332">All</td> <td data-bbox="1002 1292 1375 1332">ESP Electricity</td> </tr> <tr> <td data-bbox="649 1332 715 1373">26</td> <td data-bbox="715 1332 1002 1373">All</td> <td data-bbox="1002 1332 1375 1373">Energetics Electricity Ltd</td> </tr> <tr> <td data-bbox="649 1373 715 1435">27</td> <td data-bbox="715 1373 1002 1435">All</td> <td data-bbox="1002 1373 1375 1435">The Electricity Network Company Ltd</td> </tr> <tr> <td data-bbox="649 1435 715 1476">29</td> <td data-bbox="715 1435 1002 1476">All</td> <td data-bbox="1002 1435 1375 1476">Harlaxton Energy Networks</td> </tr> </tbody> </table>	ID	Distribution Service Area	Company	10	East of England	UK Power Networks	11	East Midlands	Western Power Distribution	12	London	UK Power Networks	13	Merseyside and North Wales	Scottish Power	14	Midlands	Western Power Distribution	15	Northern	Northern Powergrid	16	North Western	Electricity North West	17	Scottish Hydro Electric (and embedded networks in other areas)	Scottish Hydro Electric Power Distribution plc	18	South Scotland	Scottish Power	19	South East England	UK Power Networks	20	Southern Electric (and embedded networks in other areas)	Southern Electric Power Distribution plc	21	South Wales	Western Power Distribution	22	South Western	Western Power Distribution	23	Yorkshire	Northern Powergrid	24	All	Independent Power Networks	25	All	ESP Electricity	26	All	Energetics Electricity Ltd	27	All	The Electricity Network Company Ltd	29	All	Harlaxton Energy Networks
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Distribution Network Operator (DNO)	An electricity distributor who operates one of the 14 distribution services areas and in whose electricity distribution licence the requirements of Section B of the standard conditions of that licence have effect.																																																												
Distribution Services Area	The area specified by the Gas and Electricity Markets Authority within which each DNO must provide specified distribution services.																																																												

Term	Definition
Distribution System	<p>The system consisting (wholly or mainly) of electric lines owned or operated by an authorised distributor that is used for the distribution of electricity from:</p> <ul style="list-style-type: none"> • Grid Supply Points or generation sets or other entry points <p>to the points of delivery to:</p> <ul style="list-style-type: none"> • Customers or Users or any transmission licensee in its capacity as operator of that licensee's transmission system or the Great Britain (GB) transmission system and includes any remote transmission assets (owned by a transmission licensee within England and Wales) <p>that are operated by that authorised distributor and any electrical plant, electricity meters, and metering equipment owned or operated by it in connection with the distribution of electricity, but does not include any part of the GB transmission system.</p>
EHV Distribution Charging Methodology (EDCM)	The EDCM used for calculating charges to Designated EHV Properties as required by standard licence condition 13B of the Electricity Distribution Licence.
Electricity Distribution Licence	The Electricity Distribution Licence granted or treated as granted pursuant to section 6(1) of the Electricity Act 1989.
Electricity Distributor	Any person who is authorised by an Electricity Distribution Licence to distribute electricity.
Embedded LDNO	This refers to an LDNO operating a distribution network which is embedded within another distribution network.
Embedded network	An electricity Distribution System operated by an LDNO and embedded within another distribution network.
Entry Point	A boundary point at which electricity is exported onto a Distribution System from a connected installation or from another Distribution System, not forming part of the total system (boundary point and total system having the meaning given to those terms in the BSC).
Exit Point	A point of connection at which a supply of electricity may flow from the Distribution System to the Customer's installation or User's installation or the Distribution System of another person.
Extra-High Voltage (EHV)	Nominal voltages of 22kV and above.
Gas and Electricity Markets Authority (GEMA)	As established by the Utilities Act 2000.

Term	Definition
Grid Supply Point (GSP)	A metered connection between the National Grid Electricity Transmission (NGET) system and the licensee's Distribution System at which electricity flows to or from the Distribution System.
GSP Group	A distinct electrical system that is supplied from one or more GSPs for which total supply into the GSP group can be determined for each half hour.
High Voltage (HV)	Nominal voltages of at least 1kV and less than 22kV.
Invalid Settlement Combination	A settlement combination that is not recognised as a valid combination in market domain data - see https://www.elexonportal.co.uk/MDDVIEWER .
kVA	Kilovolt amperes.
kVArh	Kilovolt ampere reactive hour.
kW	Kilowatt.
kWh	Kilowatt hour (equivalent to one "unit" of electricity).
Licensed Distribution Network operator (LDNO)	The holder of a licence in respect of distribution activities in Great Britain.
Line Loss Factor (LLF)	The factor that is used in Settlement to adjust the metering system volumes to take account of losses on the Distribution System.
Line Loss Factor Class (LLFC)	An identifier assigned to an SVA metering system which is used to assign the LLF and use of system charges.
Load Factor	$\frac{\text{annual consumption (kWh)}}{\text{maximum demand (kW)} \times \text{hours in year}}$
Low Voltage (LV)	Nominal voltages below 1kV.
Market Domain Data (MDD)	MDD is a central repository of reference data used by all Users involved in Settlement. It is essential to the operation of SVA trading arrangements.
Maximum Export Capacity (MEC)	The MEC of apparent power expressed in kVA that has been agreed can flow through the entry point to the Distribution System from the Customer's installation as specified in the connection agreement.
Maximum Import Capacity (MIC)	The MIC of apparent power expressed in kVA that has been agreed can flow through the exit point from the Distribution System to the Customer's installation as specified in the connection agreement.

Term	Definition
Measurement Class	<p>A classification of metering systems used in the BSC which indicates how consumption is measured, i.e.:</p> <ul style="list-style-type: none"> • Measurement class A - non-half-hourly metering equipment; • Measurement class B - non-half-hourly unmetered supplies; • Measurement class C - half-hourly metering equipment at or above 100kW premises; • Measurement class D - half-hourly unmetered supplies; • Measurement class E - half-hourly metering equipment below 100kW premises, and from 5 November 2015, with current transformer metering; • Measurement class F - half hourly metering equipment at below 100kW premises with current transformer or whole current metering, and at domestic premises; and • Measurement class G - half hourly metering equipment at below 100kW premises with whole current metering and not at domestic premises.
Meter Timeswitch Code (MTC)	<p>MTCs are three digit codes allowing suppliers to identify the metering installed in Customers' premises. They indicate whether the meter is single or multi-rate, pre-payment or credit, or whether it is 'related' to another meter. Further information can be found in MDD.</p>
Metering Point	<p>The point at which electricity that is exported to or imported from the licensee's Distribution System is measured, is deemed to be measured, or is intended to be measured and which is registered pursuant to the provisions of the MRA. For the purposes of this statement, GSPs are not 'metering points'.</p>
Meter Point Administration Data (MPAD)	<p>The unique reference relating to the metering point under the MRA</p>
Metering Point Administration Number (MPAN)	<p>A number (forming part of the MPAD) relating to a Metering Point under the MRA.</p>
Metering System	<p>Particular commissioned metering equipment installed for the purposes of measuring the quantities of exports and/or imports at the exit point or entry point.</p>
Metering System Identifier (MSID)	<p>MSID is a term used throughout the BSC and its subsidiary documents and has the same meaning as MPAN as used under the MRA.</p>
Master Registration Agreement (MRA)	<p>The MRA is an Agreement that sets out terms for the provision of Metering Point Administration Services (MPAS) Registrations, and procedures in relation to the Change of Supplier to any premise/metering point.</p>

Term	Definition
Nested Networks	This refers to a situation where there is more than one level of Embedded Network and therefore nested Distribution Systems between LDNOs (e.g. host DNO→primary nested DNO→ secondary nested DNO→customer).
Ofgem	Office of Gas and Electricity Markets - Ofgem is governed by GEMA and is responsible for the regulation of the distribution companies.
Profile Class (PC)	A categorisation applied to NHH MPANs and used in settlement to group customers with similar consumption patterns to enable the calculation of consumption profiles.
Settlement	The determination and settlement of amounts payable in respect of charges (including reconciling charges) in accordance with the BSC.
Settlement Class (SC)	The combination of Profile Class, Line Loss Factor Class, Time Pattern Regime and Standard Settlement Configuration, by Supplier within a GSP group and used for Settlement.
Standard Settlement Configuration (SSC)	A standard metering configuration relating to a specific combination of Time Pattern Regimes.
Supercustomer	The method of billing Users for use of system on an aggregated basis, grouping together consumption and standing charges for all similar NHH metered Customers or aggregated HH metered Customers.
Supercustomer DUoS Report	A report of profiled data by Settlement Class providing counts of MPANs and units consumed.
Supplier	An organisation with a supply license for electricity supplied to and/or exported from a metering point.
Supplier Volume Allocation (SVA)	As defined in the BSC.
Time Pattern Regime (TPR)	The pattern of switching behaviour through time that one or more meter registers follow.
Unmetered Supplies	Exit points deemed to be suitable as unmetered supplies as permitted in the Electricity (Unmetered Supply) Regulations 2001 and where operated in accordance with BSC procedure 520 ⁹ .
Use of System Charges	Charges which are applicable to those parties which use the Distribution Network.

⁹ Balancing and Settlement Code Procedures are available from <http://www.elxon.co.uk/pages/bscps.aspx>

Term	Definition
User	Someone that has a use of system agreement with the DNO e.g. a supplier, generator or other DNO.

Appendix 2 - Guidance notes¹⁰

Background

- 1.1. The electricity bill from your Supplier contains an element of charge to cover electricity distribution costs. This distribution charge covers the cost of operating and maintaining a safe and reliable Distribution System that forms the 'wires' that transport electricity between the national transmission system and end users such as homes and businesses. Our Distribution System includes overhead lines, underground cables, as well as substations and transformers.
- 1.2. In most cases, your Supplier is invoiced for the distribution charge and this is normally part of your total bill. In some cases, for example business users, the supplier may pass through the distribution charge as an identifiable line item on the electricity bill.
- 1.3. Where electricity is generated at a property your Supplier may receive a credit for energy that is exported on to the Distribution System. These credits are intended to reflect that the exported generation may reduce the need for traditional demand led reinforcement of the Distribution System.
- 1.4. Understanding your distribution charges could help you reduce your costs and increase your credits. This is achieved by understanding the components of the charge to help you identify whether there may be opportunities to change the way you use the Distribution System.

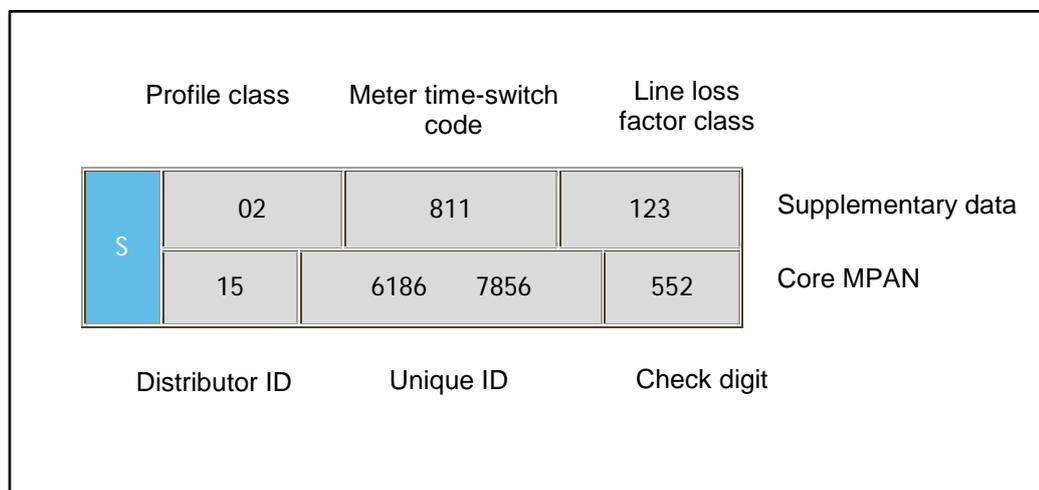
Meter point administration

- 1.5. We are responsible for managing the electricity supply points that are connected to our Distribution System. Typically every supply point is identified by a Meter Point Administration Number (MPAN). A few supply points may have more than one MPAN depending on the metering configuration (e.g. a school which may have an MPAN for the main supply and an MPAN for catering).
- 1.6. The MPAN is a 13 digit number and forms part of the 21 digit MPAD, preceded by an 'S'. The MPAD applicable to a supply point is found on the electricity bill from your Supplier. This number enables you to establish who your electricity distributor is, details of the characteristics of the supply and importantly the distribution charges that are applicable to your premise.

¹⁰ These guidance notes are provided for additional information and do not form part of the application of charges.

- 1.7. The 21-digit number is normally presented in two sections as shown in the following diagram. The top section is supplementary data which gives information about the characteristics of supply, while the bottom 'core' is the unique identifier.

Full MPAD diagram example



- 1.8. Generally, you will only need to know the Distributor ID and line loss factor class to identify the distribution charges for your premise. However, there are some premises where charges are specific to that site. In these instances the charges are identified by the core MPAN. The Distributor ID for Northern Powergrid Northeast is 15. Other Distributor IDs can be referenced in the glossary.
- 1.9. Additionally it can be useful to understand the profile class provided in the supplementary data. The profile class will be a number between 00 and 08. The following list provides details of the allocation of profile classes to types of customers:
- '01' Domestic customers with unrestricted supply
 - '02' Domestic customers with restricted load, for example off-peak heating
 - '03' Non-domestic customers with unrestricted supply
 - '04' Non-domestic customers with restricted load, for example off-peak heating
 - '05' Non-domestic maximum demand customers with a Load Factor of less than 20%
 - '06' Non-domestic maximum demand customers with a Load Factor between 20% and 30%
 - '07' Non-domestic maximum demand customers with a Load Factor between 30% and 40%
 - '08' Non-domestic maximum demand customers with a Load Factor over 40% or non-half-hourly metered generation customers

- '00' Half-hourly metered demand and generation customers
- 1.10. Unmetered Supplies will be allocated to profile class 01, 08 and 00 depending on the type of load or the measurement method of the load.
- 1.11. The allocation of the profile class will affect your charges. If you feel that you have been allocated the wrong profile class, please contact your Supplier as they are responsible for this.

Your charges

- 1.12. All distribution charges that relate to our Distributor ID 15 are provided in this statement.
- 1.13. You can identify your charges by referencing your line loss factor class, from Annex 1. If the MPAN is for a Designated EHV Property then the charges will be found in Annex 2. In a few instances, the charges maybe contained in Annex 3. When identifying charges in Annex 2, please note that some line loss factor classes have more than one charge. In this instance you will need to select the correct charge by cross referencing with the core MPAN provided in the table.
- 1.14. Once you have identified which charge structure applies to your MPAN then you will be able to calculate an estimate of your distribution charge using the calculator provided in the spreadsheet 'Schedule of charges and other tables' found in the sheet called 'Charge Calculator'. This spreadsheet can be downloaded from our website <http://www.northernpowergrid.com/document-library/charges>.

Reducing your charges

- 1.15. The most effective way to reduce your energy charges is to reduce your consumption by switching off or using more energy efficient appliances. However, there are also other potential opportunities to reduce your distribution charges; for example, it may be beneficial to shift demand or generation to a better time period. Demand use is likely to be cheaper outside the peak periods and generation credits more beneficial, although the ability to directly benefit will be linked to the structure of your supply charges.
- 1.16. The calculator mentioned above provides the opportunity to establish a forecast of the change in distribution charges that could be achieved if you are able to change any of the consumption related inputs.

Reactive power and reactive power charges

- 1.17. Reactive power is a separately charged component of connections that are half-hourly metered. Reactive power charges are generally avoidable if 'best practice' design of

the properties' electrical installation has been provided in order to maintain a power factor between 0.95 and unity at the Metering Point.

- 1.18. Reactive Power (kVA_rh) is the difference between working power (active power measured in kW) and total power consumed (apparent power measured in kVA). Essentially it is a measure of how efficiently electrical power is transported through an electrical installation or a Distribution System.
- 1.19. Power flowing with a power factor of unity results in the most efficient loading of the Distribution System. Power flowing with a power factor of less than 0.95 results in much higher losses in the Distribution System, a need to potentially provide higher capacity electrical equipment and consequently a higher bill for you the consumer. A comparatively small improvement in power factor can bring about a significant reduction in losses since losses are proportional to the square of the current.
- 1.20. Different types of electrical equipment require some 'reactive power' in addition to 'active power' in order to work effectively. Electric motors, transformers and fluorescent lighting, for example, may produce poor power factors due to the nature of their inductive load. However, if good design practice is applied then the poor power factor of appliances can be corrected as near as possible to source. Alternatively poor power factor can be corrected centrally near to the meter.
- 1.21. There are many advantages that can be achieved by correcting poor power factor. These include: reduced energy bills through lower reactive charges, lower capacity charges and reduced power consumption and reduced voltage drop in long cable runs.

Site-specific EDCM charges

- 1.22. A site classified as a Designated EHV Property is subject to a locational based charging methodology (referred to as EDCM) for higher voltage network users. Distributors use two approved approaches: LRIC and Forward Cost Pricing (FCP) and we use the LRIC methodology. The EDCM will apply to Customers connected at Extra-High Voltage or connected at High Voltage and metered at a high voltage substation.
- 1.23. EDCM charges are site-specific, reflecting the degree to which the local and higher voltage networks have the capacity to serve more demand or generation without the need to upgrade the electricity infrastructure. The charges also reflect the networks specifically used to deliver the electricity to the site as well as the usage at the site. Generators with non-intermittent output and deemed to be providing beneficial support to our networks may qualify to receive payment.
- 1.24. The charges under the EDCM comprise of the following individual components:

a) **Fixed charge** - This charge recovers operational costs associated with those connection assets that are provided for the 'sole' use of the customer. The value of these assets is used as a basis to derive the charge.

b) **Capacity charge (pence/kVA/day)** - This charge comprises the relevant LRIC component, the National Grid Electricity Transmission cost and other regulated costs.

Capacity charges are levied on the MIC, MEC, and any exceeded capacity. You may wish to review your MIC or MEC periodically to ensure it remains appropriate for your needs as you may be paying for more capacity than you require. If you wish to make changes contact us via the details in paragraph 1.12.

The LRIC cost is locational and reflects our assessment of future network reinforcement necessary at voltage of connection (local) and beyond at all higher voltages (remote) relevant to the customer's connection. This results in the allocation of higher costs in more capacity congested parts of the network reflecting the greater likelihood of future reinforcement in these areas, and the allocation of lower costs in less congested parts of the network. The local LRIC cost is included in the capacity charge.

Our regulated costs include direct and indirect operational costs and a residual amount to ensure recovery of our regulated allowed revenue. The capacity charge recovers these costs using the customer usage profile and the relevant assets being used to transport electricity between the source substation and customer's Metering Point.

c) **Super-red unit charge (pence/kWh)** - This charge recovers the remote LRIC component. The charge is positive for import and negative for export which means you can either reduce your charges by minimising consumption or increasing export at those times. The charge is applied on consumption during the Super-red time period as detailed in Annex 2.

1.25. Future charge rates may be affected by consumption during the Super-red period. Therefore reducing consumption in the Super-red time period may be beneficial.

1.26. **Reactive Power** -The EDCM does not include a separate charge component for any reactive power flows (kVAr) for either demand or generation. However, the EDCM charges do reflect the effect on the network of the customer's power factor, for example unit charges can increase if your site power factor is poor (lower than 0.95). Improving your site's power factor will also reduce the maximum demand (kVA) for the same power consumed in kW thus providing scope to reduce your agreed capacity requirements.

Annex 1 - Schedule of Charges for use of the Distribution System by LV and HV Designated Properties

Northern Powergrid (Northeast) Ltd - Effective from 1 April 2017 - Final LV and HV charges

Time Bands for Half Hourly Metered Properties			
Time periods	Red Time Band	Amber Time Band	Green Time Band
Monday to Friday (Including Bank Holidays) All Year	16:00 to 19:30	08:00 to 16:00 19:30 to 22:00	00:00 to 08:00 22:00 to 24:00
Saturday and Sunday All Year			00:00 to 24:00
Notes	All the above times are in UK Clock time		

Time Bands for Half Hourly Unmetered Properties			
	Black Time Band	Yellow Time Band	Green Time Band
Monday to Friday (Including Bank Holidays) November to February Inclusive	16:00 to 19:30	08:00 to 16:00 19:30 to 22:00	00:00 to 08:00 22:00 to 24:00
Monday to Friday (Including Bank Holidays) April to October Inclusive and March		08:00 to 22:00	00:00 to 08:00 22:00 to 24:00
Saturday and Sunday All year			00:00 to 24:00
Notes	All the above times are in UK Clock time		

Tariff name	Open LLFCs	PCs	Unit charge 1 (NHH) or red/black charge (HH) p/kWh	Unit charge 2 (NHH) or amber/yellow charge (HH) p/kWh	Green charge (HH) p/kWh	Fixed charge p/MPAN/day	Capacity charge p/kVA/day	Reactive power charge p/kVAh	Exceeded capacity charge p/kVA/day	Closed LLFCs
Domestic Unrestricted	1	1	2.348			4.89				998, 999
Domestic Two Rate	2	2	2.906	0.096		4.89				
Domestic Off Peak (related MPAN)	12	2	0.285							
Small Non Domestic Unrestricted	203	3	2.391			5.29				
Small Non Domestic Two Rate	204	4	2.910	0.175		5.29				
Small Non Domestic Off Peak (related MPAN)	205	4	0.358							
LV Medium Non-Domestic	257	5-8	2.327	0.092		45.46				
LV Sub Medium Non-Domestic	265	5-8	1.549	0.077		14.42				
HV Medium Non-Domestic	304	5-8	1.192	0.047		150.38				
LV Network Domestic	249	0	13.214	0.954	0.083	4.89				
LV Network Non-Domestic Non-CT	278	0	14.832	1.071	0.093	5.29				
LV HH Metered	251	0	10.494	0.696	0.062	14.13	1.76	0.237	1.76	
LV Sub HH Metered	293	0	9.293	0.528	0.050	14.42	2.25	0.175	2.25	
HV HH Metered	301	0	7.556	0.364	0.036	150.38	2.12	0.132	2.12	
NHH UMS category A	506	8	1.568							
NHH UMS category B	507	1	2.329							
NHH UMS category C	508	1	4.310							
NHH UMS category D	509	1	1.032							
LV UMS (Pseudo HH Metered)	554 & 555	0	34.526	0.913	0.078					
LV Generation NHH or Aggregate HH	774	8&0	(0.625)							
LV Sub Generation NHH	776	8	(0.537)							
LV Generation Intermittent	792	0	(0.625)					0.121		
LV Generation Non-Intermittent	794	0	(3.928)	(0.619)	(0.041)			0.121		
LV Sub Generation Intermittent	793	0	(0.537)					0.115		
LV Sub Generation Non-Intermittent	795	0	(3.377)	(0.531)	(0.035)			0.115		
HV Generation Intermittent	796	0	(0.360)			58.34		0.084		
HV Generation Non-Intermittent	798	0	(2.284)	(0.354)	(0.022)	58.34		0.084		

Annex 2 - Schedule of Charges for use of the Distribution System by Designated EHV Properties (including LDNOs with Designated EHV Properties/end-users)

Northern Powergrid (Northeast) Ltd - Effective from 1 April 2017 - Final EDCM charges

Time Periods for Designated EHV Properties	
Time periods	Super Red Time Band
Monday to Friday (Including Bank Holidays) November to February Inclusive	1600 - 1930
Notes	All the above times are in UK Clock time

Import Unique Identifier	LLFC	Import MPANs/MSIDs	Export Unique Identifier	LLFC	Export MPANs/MSIDs	Name	Import Super Red unit charge (p/kWh)	Import fixed charge (p/day)	Import capacity charge (p/kVA/day)	Import exceeded capacity charge (p/kVA/day)	Export Super Red unit charge (p/kWh)	Export fixed charge (p/day)	Export capacity charge (p/kVA/day)	Export exceeded capacity charge (p/kVA/day)
	601	1592001005770 1592101005776		701	1574000216135 1594001005774	EHV Site Specific - Generation Exempt (LLFC 601 & 701)			468.81	0.81	0.81			
	603	1592001051182				EHV Site Specific (LLFC 603)		6,449.65	2.04	2.04				
	604	MSID 7299		727	MSID 7300	EHV Site Specific (LLFC 604 & 727)		42.56	0.58	0.58		851.16	0.05	0.05
	605	1592001092676				EHV Site Specific (LLFC 605)	0.293	1,582.43	1.63	1.63				
	606	1592001092719				EHV Site Specific (LLFC 606)	0.286	3,164.87	2.15	2.15				
	607	1592001092728				EHV Site Specific (LLFC 607)	0.706	3,164.87	2.85	2.85				
	608	1592001092737				EHV Site Specific (LLFC 608)		3,164.87	1.76	1.76				
	609	1592001046085				EHV Site Specific (LLFC 609)		566.91	2.90	2.90				
	611	1592001111628				EHV Site Specific (LLFC 611)		2,791.99	5.83	5.83				
	612	1592001073112		704	1594001073116	EHV Site Specific (LLFC 612 & 704)	0.255	151.06	1.25	1.25	(0.319)	1,510.57	0.05	0.05
	613	1592001116013				EHV Site Specific (LLFC 613)	0.685	52.63	3.09	3.09				
	614	1592001055257		709	1594001055250	EHV Site Specific - Generation Exempt (LLFC 614 & 709)		2,354.88	0.95	0.95				
	615 & 616	1592001055239 1592001055248				EHV Site Specific (LLFC 615 & 616)	0.191	2,657.17	1.90	1.90				
	617	1592001110572				EHV Site Specific (LLFC 617)		7,463.18	1.48	1.48				
	618	1592001094308				EHV Site Specific (LLFC 618)	0.922	2,671.01	3.84	3.84				
	619	1570000150382		710	1594000000038	EHV Site Specific - Generation Exempt (LLFC 619 & 710)	0.022	15.70	1.11	1.11				
	620	1592001007476				EHV Site Specific (LLFC 620)		1,133.81	4.31	4.31				
	621	1592001007494				EHV Site Specific (LLFC 621)	0.096	52.63	1.98	1.98				
	622	1592001036574		711	1594001036578	EHV Site Specific - Generation Exempt (LLFC 622 & 711)	0.142	303.99	1.20	1.20				
	623	1592001063540				EHV Site Specific (LLFC 623)	0.009	3,200.50	2.23	2.23				
	625	1592001006890		748	1594001006893	EHV Site Specific - Generation Exempt (LLFC 625 & 748)	1.307	16.63	1.55	1.55				
	627	1570000199077		729	1574000199083	EHV Site Specific - Generation Exempt (LLFC 627 & 729)		721.80	0.88	0.88				
	626	1592001005637				EHV Site Specific (LLFC 626)	0.348	2,503.11	3.01	3.01				
	628	1592001111405				EHV Site Specific (LLFC 628)	0.920	480.78	3.45	3.45				
	631	1592001110216				EHV Site Specific (LLFC 631)	0.001	52.63	2.88	2.88				
	632	1592001007467				EHV Site Specific (LLFC 632)	0.279	204.96	3.60	3.60				
	633	1580001273940 1580001273950				EHV Site Specific (LLFC 633)	0.727	2,748.41	3.70	3.70				
	637	1592001141543		728	1594001141547	EHV Site Specific - Generation Exempt (LLFC 637 & 728)	0.047	847.16	1.35	1.35				
	680	1580000675845		759	1574000275033	EHV Site Specific (LLFC 680 & 759)	1.330	2.37	2.23	2.23		100.11	0.05	0.05
	681	1580000872387		760	1574000283735	EHV Site Specific (LLFC 681 & 760)	0.190	86.43	1.12	1.12		3,457.17	0.05	0.05
	544	1570000124531		761	1594000000047	EHV Site Specific - Generation Exempt (LLFC 544 & 761)		7.38	0.77	0.77				
	682	1580000909309		762	1574000285644	EHV Site Specific (LLFC 682 & 762)	0.256	655.82	0.74	0.74	(0.319)	3,577.22	0.05	0.05
	691	1592101007746				EHV Site Specific (LLFC 691)	0.044	26.32	3.56	3.56				
	683	1570000166434		763	1594000000029	EHV Site Specific - Generation Exempt (LLFC 683 & 763)		4.21	0.91	0.91				
	692	1580000867554 1580000911799				EHV Site Specific (LLFC 692)	1.148	52.63	2.44	2.44				
	693	1592001074941				EHV Site Specific (LLFC 693)	1.169	26.32	3.38	3.38				
	694	1570000190631				EHV Site Specific (LLFC 694)	1.066	52.63	4.45	4.45				
	695	1580000918163 1580000918172				EHV Site Specific (LLFC 695)	0.003	52.63	2.15	2.15				
	684	1580001085400		764	1574000298500	EHV Site Specific (LLFC 684 & 764)	0.007	472.06	1.10	1.10	(0.173)	3,147.42	0.05	0.05
	685	1580001132432		765	1574000302403	EHV Site Specific (LLFC 685 & 765)		25.50	0.61	0.61		698.72	0.05	0.05
	686	1580001150566 1580001150575		766	1574000303940 1574000303959	EHV Site Specific (LLFC 686 & 766)		237.88	0.47	0.47		15,550.03	0.05	0.05
	687	TBC				EHV Site Specific (LLFC 687)		1,077.79	1.00	1.00				
	688	1580001208659		767	1574000309384	EHV Site Specific (LLFC 688 & 767)		14.22	1.09	1.09		1,621.09	0.05	0.05
	689	1580001208668		768	1574000309375	EHV Site Specific (LLFC 689 & 768)		73.45	0.94	0.94		3,170.13	0.05	0.05
	690	1580001174414		782	1574000306374	EHV Site Specific (LLFC 690 & 782)	0.316	29.41	2.84	2.84		1,058.62	0.05	0.05
	540	1580001190763		783	1574000307917	EHV Site Specific (LLFC 540 & 783)	0.003	1.70	0.95	0.95	(0.038)	408.76	0.05	0.05
	541	1580001197945		784	1574000308405	EHV Site Specific (LLFC 541 & 784)	0.255	257.49	0.71	0.71	(0.319)	3,804.61	0.05	0.05
	542	1580001278406		785	1574000315040	EHV Site Specific (LLFC 542 & 785)		136.14	0.79	0.79		251.85	0.05	0.05
	543	1580001278415				EHV Site Specific (LLFC 543)		3,270.62	1.47	1.47				
	545	1580001417656				EHV Site Specific (LLFC 545)	0.095	13,939.36	2.20	2.20				
	546	TBC		786	TBC	EHV Site Specific (LLFC 546 & 786)	0.254	243.89	1.79	1.79	(0.318)	1,776.91	0.05	0.05
	547	TBC		787	TBC	EHV Site Specific (LLFC 547 & 787)		19.06	2.15	2.15		1,827.31	0.05	0.05
	548	TBC		788	TBC	EHV Site Specific (LLFC 548 & 788)		151.47	2.15	2.15		4,385.96	0.05	0.05

Annex 2 - Schedule of Charges for use of the Distribution System by Designated EHV Properties (including LDNOs with Designated EHV Properties/end-users)

Import Unique Identifier	LLFC	Import MPANs/MSIDs	Export Unique Identifier	LLFC	Export MPANs/MSIDs	Name	Import Super Red unit charge (p/kWh)	Import fixed charge (p/day)	Import capacity charge (p/kVA/day)	Import exceeded capacity charge (p/kVA/day)	Export Super Red unit charge (p/kWh)	Export fixed charge (p/day)	Export capacity charge (p/kVA/day)	Export exceeded capacity charge (p/kVA/day)
	549	TBC		789	TBC	EHV Site Specific (LLFC 549 & 789)		206.79	1.88	1.88		14,613.45	0.05	0.05
	560	TBC		806	TBC	EHV Site Specific (LLFC 560 & 806)		20.87	1.74	1.74		2,194.86	0.05	0.05
	561	TBC		807	TBC	EHV Site Specific (LLFC 561 & 807)		41.04	1.54	1.54		7,114.18	0.05	0.05

*Charges superseded. Amended charges published in Annex 6 in line with clause 5.7 of the LC14 charging statement. Annex 6 available from: <http://www.northernpowergrid.com/document-library/charges>

Annex 2a - Schedule of Import Charges for use of the Distribution System by Designated EHV Properties (including LDNOs with Designated EHV Properties/end-users)

Northern Powergrid (Northeast) Ltd - Effective from 1 April 2017 - Final EDCM import charges

Import Unique Identifier	LLFC	Import MPANs/MSIDs	Name	Import Super Red unit charge (p/kWh)	Import fixed charge (p/day)	Import capacity charge (p/kVA/day)	Import exceeded capacity charge (p/kVA/day)
	601	1592001005770	EHV Site Specific - Generation Exempt (LLFC 601 & 701)		468.81	0.81	0.81
	603	1592001051182	EHV Site Specific (LLFC 603)		6,449.65	2.04	2.04
	604	MSID 7299	EHV Site Specific (LLFC 604 & 727)		42.56	0.58	0.58
	605	1592001092676	EHV Site Specific (LLFC 605)	0.293	1,582.43	1.63	1.63
	606	1592001092719	EHV Site Specific (LLFC 606)	0.286	3,164.87	2.15	2.15
	607	1592001092728	EHV Site Specific (LLFC 607)	0.706	3,164.87	2.85	2.85
	608	1592001092737	EHV Site Specific (LLFC 608)		3,164.87	1.76	1.76
	609	1592001046085	EHV Site Specific (LLFC 609)		566.91	2.90	2.90
	611	1592001111628	EHV Site Specific (LLFC 611)		2,791.99	5.83	5.83
	612	1592001073112	EHV Site Specific (LLFC 612 & 704)	0.255	151.06	1.25	1.25
	613	1592001116013	EHV Site Specific (LLFC 613)	0.685	52.63	3.09	3.09
	614	1592001055257	EHV Site Specific - Generation Exempt (LLFC 614 & 709)		2,354.88	0.95	0.95
	615 &	1592001055239	EHV Site Specific (LLFC 615 & 616)	0.191	2,657.17	1.90	1.90
	617	1592001110572	EHV Site Specific (LLFC 617)		7,463.18	1.48	1.48
	618	1592001094308	EHV Site Specific (LLFC 618)	0.922	2,671.01	3.84	3.84
	619	1570000150382	EHV Site Specific - Generation Exempt (LLFC 619 & 710)	0.022	15.70	1.11	1.11
	620	1592001007476	EHV Site Specific (LLFC 620)		1,133.81	4.31	4.31
	621	1592001007494	EHV Site Specific (LLFC 621)	0.096	52.63	1.98	1.98
	622	1592001036574	EHV Site Specific - Generation Exempt (LLFC 622 & 711)	0.142	303.99	1.20	1.20
	624*	1592001063540	EHV Site Specific (LLFC 624)	0.009	3,200.50	2.23	2.23
	625	1592001006890	EHV Site Specific - Generation Exempt (LLFC 625 & 748)	1.307	16.63	1.55	1.55
	627	1570000199077	EHV Site Specific - Generation Exempt (LLFC 627 & 729)		721.80	0.88	0.88
	626	1592001005637	EHV Site Specific (LLFC 626)	0.348	2,503.11	3.01	3.01
	628	1592001111405	EHV Site Specific (LLFC 628)	0.920	480.78	3.45	3.45
	631	1592001110216	EHV Site Specific (LLFC 631)	0.001	52.63	2.88	2.88
	632	1592001007467	EHV Site Specific (LLFC 632)	0.279	204.96	3.60	3.60
	633	1580001273940	EHV Site Specific (LLFC 633)	0.727	2,748.41	3.70	3.70
	637	1592001141543	EHV Site Specific - Generation Exempt (LLFC 637 & 728)	0.047	847.16	1.35	1.35
	680	1580000675845	EHV Site Specific (LLFC 680 & 759)	1.330	2.37	2.23	2.23
	681	1580000872387	EHV Site Specific (LLFC 681 & 760)	0.190	86.43	1.12	1.12
	544	1570000124531	EHV Site Specific - Generation Exempt (LLFC 544 & 761)		7.38	0.77	0.77
	682	1580000909309	EHV Site Specific (LLFC 682 & 762)	0.256	655.82	0.74	0.74
	691	1592101007746	EHV Site Specific (LLFC 691)	0.044	26.32	3.56	3.56
	683	1570000166434	EHV Site Specific - Generation Exempt (LLFC 683 & 763)		4.21	0.91	0.91
	692	1580000867554	EHV Site Specific (LLFC 692)	1.148	52.63	2.44	2.44
	693	1592001074941	EHV Site Specific (LLFC 693)	1.169	26.32	3.38	3.38
	694	1570000190631	EHV Site Specific (LLFC 694)	1.066	52.63	4.45	4.45
	695	1580000918163	EHV Site Specific (LLFC 695)	0.003	52.63	2.15	2.15
	684	1580001085400	EHV Site Specific (LLFC 684 & 764)	0.007	472.06	1.10	1.10
	685	1580001132432	EHV Site Specific (LLFC 685 & 765)		25.50	0.61	0.61
	686	1580001150566	EHV Site Specific (LLFC 686 & 766)		237.88	0.47	0.47
	687	TBC	EHV Site Specific (LLFC 687)		1,077.79	1.00	1.00
	688	1580001208659	EHV Site Specific (LLFC 688 & 767)		14.22	1.09	1.09
	689	1580001208668	EHV Site Specific (LLFC 689 & 768)		73.45	0.94	0.94
	690	1580001174414	EHV Site Specific (LLFC 690 & 782)	0.316	29.41	2.84	2.84
	540	1580001190763	EHV Site Specific (LLFC 540 & 783)	0.003	1.70	0.95	0.95
	541	1580001197945	EHV Site Specific (LLFC 541 & 784)	0.255	257.49	0.71	0.71
	542	1580001278406	EHV Site Specific (LLFC 542 & 785)		136.14	0.79	0.79
	543	1580001278415	EHV Site Specific (LLFC 543)		3,270.62	1.47	1.47
	545	1580001417656	EHV Site Specific (LLFC 545)	0.095	13,939.36	2.20	2.20
	546	TBC	EHV Site Specific (LLFC 546 & 786)	0.254	243.89	1.79	1.79
	547	TBC	EHV Site Specific (LLFC 547 & 787)		19.06	2.15	2.15
	548	TBC	EHV Site Specific (LLFC 548 & 788)		151.47	2.15	2.15
	549	TBC	EHV Site Specific (LLFC 549 & 789)		206.79	1.88	1.88
	560	TBC	EHV Site Specific (LLFC 560 & 806)		20.87	1.74	1.74
	561	TBC	EHV Site Specific (LLFC 561 & 807)		41.04	1.54	1.54

*Charges superseded. Amended charges published in Annex 6 in line with clause 5.7 of the LC14 charging statement. Annex 6 available from: <http://www.northernpowergrid.com/document-library/charges>

Annex 2b - Schedule of Export Charges for use of the Distribution System by Designated EHV Properties (including LDNOs with Designated EHV Properties/end-users)

Northern Powergrid (Northeast) Ltd - Effective from 1 April 2017 - Final EDCM export charges

Export Unique Identifier	LLFC	Export MPANs/MSIDs	Name	Export Super Red unit charge (p/kWh)	Export fixed charge (p/day)	Export capacity charge (p/kVA/day)	Export exceeded capacity charge (p/kVA/day)
701		1574000216135	EHV Site Specific - Generation Exempt (LLFC 601 & 701)				
727		MSID_7300	EHV Site Specific (LLFC 604 & 727)		851.16	0.05	0.05
704		1594001073116	EHV Site Specific (LLFC 612 & 704)	(0.319)	1,510.57	0.05	0.05
709		1594001055250	EHV Site Specific - Generation Exempt (LLFC 614 & 709)				
710		1594000000038	EHV Site Specific - Generation Exempt (LLFC 619 & 710)				
711		1594001036578	EHV Site Specific - Generation Exempt (LLFC 622 & 711)				
748		1594001006893	EHV Site Specific - Generation Exempt (LLFC 625 & 748)				
729		1574000199083	EHV Site Specific - Generation Exempt (LLFC 627 & 729)				
728		1594001141547	EHV Site Specific - Generation Exempt (LLFC 637 & 728)				
759		1574000275033	EHV Site Specific (LLFC 680 & 759)		100.11	0.05	0.05
760		1574000283735	EHV Site Specific (LLFC 681 & 760)		3,457.17	0.05	0.05
761		1594000000047	EHV Site Specific - Generation Exempt (LLFC 544 & 761)				
762		1574000285644	EHV Site Specific (LLFC 682 & 762)	(0.319)	3,577.22	0.05	0.05
763		1594000000029	EHV Site Specific - Generation Exempt (LLFC 683 & 763)				
764		1574000298500	EHV Site Specific (LLFC 684 & 764)	(0.173)	3,147.42	0.05	0.05
765		1574000302403	EHV Site Specific (LLFC 685 & 765)		698.72	0.05	0.05
766		1574000303940	EHV Site Specific (LLFC 686 & 766)		15,550.03	0.05	0.05
767		1574000309384	EHV Site Specific (LLFC 688 & 767)		1,621.09	0.05	0.05
768		1574000309375	EHV Site Specific (LLFC 689 & 768)		3,170.13	0.05	0.05
782		1574000306374	EHV Site Specific (LLFC 690 & 782)		1,058.62	0.05	0.05
783		1574000307917	EHV Site Specific (LLFC 540 & 783)	(0.038)	408.76	0.05	0.05
784		1574000308405	EHV Site Specific (LLFC 541 & 784)	(0.319)	3,804.61	0.05	0.05
785		1574000315040	EHV Site Specific (LLFC 542 & 785)		251.85	0.05	0.05
786		TBC	EHV Site Specific (LLFC 546 & 786)	(0.318)	1,776.91	0.05	0.05
787		TBC	EHV Site Specific (LLFC 547 & 787)		1,827.31	0.05	0.05
788		TBC	EHV Site Specific (LLFC 548 & 788)		4,385.96	0.05	0.05
789		TBC	EHV Site Specific (LLFC 549 & 789)		14,613.45	0.05	0.05
806		TBC	EHV Site Specific (LLFC 560 & 806)		2,194.86	0.05	0.05
807		TBC	EHV Site Specific (LLFC 561 & 807)		7,114.18	0.05	0.05

Annex 3 - Schedule of Charges for use of the Distribution System to Preserved/Additional LLFC Classes

Northern Powergrid (Northeast) Ltd - Effective from 1 April 2017 - Final LV and HV tariffs

NHH preserved charges/additional LLFCs									
	Closed LLFCs	PCs	Unit charge 1 (NHH) p/kWh	Unit charge 2 (NHH) p/kWh	Fixed charge p/MPAN/day				
Notes:	Unit time periods are as specified in the SSC.								

HH preserved charges/additional LLFCs									
	Closed LLFCs	PCs	Red/black charge (HH) p/kWh	Amber/yellow charge (HH) p/kWh	Green charge (HH) p/kWh	Fixed charge p/MPAN/day	Capacity charge p/kVA/day	Reactive power charge p/kVAh	Excess capacity charge p/kVA/day
Notes:	Time periods Unit charges in the red time band apply – between 16:00 and 19:30, Monday to Friday including bank holidays. Unit charges in the amber time band apply – between 08:00 and 16:00; and between 19:30 and 22:00, Monday to Friday including bank holidays. Unit charges in the green time band apply – between 00:00 and 08:00; and between 22:00 and 24:00, Monday to Friday including bank holidays, and between 00:00 and 24:00 Saturday and Sunday. All times are UK clock-time.								

Annex 4 - Charges applied to LDNOs with HV/LV end users

Northern Powergrid (Northeast) Ltd - Effective from 1 April 2017 - Final LDNO tariffs

Time Bands for Half Hourly Metered Properties			
Time periods	Red Time Band	Amber Time Band	Green Time Band
Monday to Friday (Including Bank Holidays) All Year	16:00 to 19:30	08:00 to 16:00 19:30 to 22:00	00:00 to 08:00 22:00 to 24:00
Saturday and Sunday All Year			00:00 to 24:00
Notes	All the above times are in UK Clock time		

Time Bands for Half Hourly Unmetered Properties			
	Black Time Band	Yellow Time Band	Green Time Band
Monday to Friday (Including Bank Holidays) November to February Inclusive	16:00 to 19:30	08:00 to 16:00 19:30 to 22:00	00:00 to 08:00 22:00 to 24:00
Monday to Friday (Including Bank Holidays) April to October Inclusive and March		08:00 to 22:00	00:00 to 08:00 22:00 to 24:00
Saturday and Sunday All year			00:00 to 24:00
Notes	All the above times are in UK Clock time		

Tariff name	Unique billing identifier	PCs	Unit charge 1 (NHH) or red/black charge (HH) p/kWh	Unit charge 2 (NHH) or amber/yellow charge (HH) p/kWh	Green charge (HH) p/kWh	Fixed charge p/MPAN/day	Capacity charge p/kVA/day	Reactive power charge p/kVAh	Exceeded capacity charge p/kVA/day
LDNO LV: Domestic Unrestricted	150	1	1.415			2.95			
LDNO LV: Domestic Two Rate	151	2	1.751	0.058		2.95			
LDNO LV: Domestic Off Peak (related MPAN)	152	2	0.172						
LDNO LV: Small Non Domestic Unrestricted	153	3	1.441			3.19			
LDNO LV: Small Non Domestic Two Rate	154	4	1.753	0.105		3.19			
LDNO LV: Small Non Domestic Off Peak (related MPAN)	155	4	0.216						
LDNO LV: LV Medium Non-Domestic	156	5-8	1.402	0.055		27.39			
LDNO LV: LV Network Domestic	199	0	7.962	0.575	0.050	2.95			
LDNO LV: LV Network Non-Domestic Non-CT	206	0	8.937	0.645	0.056	3.19			
LDNO LV: LV HH Metered	157	0	6.323	0.419	0.037	8.51	1.06	0.143	1.06
LDNO LV: NHH UMS category A	37	8	0.945						
LDNO LV: NHH UMS category B	38	1	1.403						
LDNO LV: NHH UMS category C	39	1	2.597						
LDNO LV: NHH UMS category D	40	1	0.622						
LDNO LV: LV UMS (Pseudo HH Metered)	170	0	20.803	0.550	0.047				
LDNO LV: LV Generation NHH or Aggregate HH	172	8&0	(0.625)			0.00			
LDNO LV: LV Generation Intermittent	173	0	(0.625)			0.00		0.121	
LDNO LV: LV Generation Non-Intermittent	174	0	(3.928)	(0.619)	(0.041)	0.00		0.121	
LDNO HV: Domestic Unrestricted	158	1	0.835			1.74			
LDNO HV: Domestic Two Rate	159	2	1.034	0.034		1.74			
LDNO HV: Domestic Off Peak (related MPAN)	160	2	0.101						
LDNO HV: Small Non Domestic Unrestricted	161	3	0.851			1.88			
LDNO HV: Small Non Domestic Two Rate	162	4	1.035	0.062		1.88			
LDNO HV: Small Non Domestic Off Peak (related MPAN)	163	4	0.127						
LDNO HV: LV Medium Non-Domestic	164	5-8	0.828	0.033		16.17			
LDNO HV: LV Network Domestic	207	0	4.701	0.339	0.030	1.74			
LDNO HV: LV Network Non-Domestic Non-CT	208	0	5.277	0.381	0.033	1.88			
LDNO HV: LV HH Metered	165	0	3.733	0.248	0.022	5.03	0.63	0.084	0.63
LDNO HV: LV Sub HH Metered	166	0	5.554	0.316	0.030	8.62	1.34	0.105	1.34
LDNO HV: HV HH Metered	167	0	5.548	0.267	0.026	110.42	1.56	0.097	1.56
LDNO HV: NHH UMS category A	41	8	0.558						
LDNO HV: NHH UMS category B	42	1	0.829						
LDNO HV: NHH UMS category C	43	1	1.533						
LDNO HV: NHH UMS category D	44	1	0.367						
LDNO HV: LV UMS (Pseudo HH Metered)	171	0	12.283	0.325	0.028				
LDNO HV: LV Generation NHH or Aggregate HH	175	8&0	(0.625)			0.00			
LDNO HV: LV Sub Generation NHH	176	8	(0.537)			0.00			
LDNO HV: LV Generation Intermittent	177	0	(0.625)			0.00		0.121	
LDNO HV: LV Generation Non-Intermittent	178	0	(3.928)	(0.619)	(0.041)	0.00		0.121	
LDNO HV: LV Sub Generation Intermittent	179	0	(0.537)			0.00		0.115	

Annex 4 - Charges applied to LDNOs with HV/LV end users

Tariff name	Unique billing identifier	PCs	Unit charge 1 (NHH) or red/black charge (HH) p/kWh	Unit charge 2 (NHH) or amber/yellow charge (HH) p/kWh	Green charge (HH) p/kWh	Fixed charge p/MPAN/day	Capacity charge p/kVA/day	Reactive power charge p/kVAh	Exceeded capacity charge p/kVA/day
LDNO HV: LV Sub Generation Non-Intermittent	180	0	(3.377)	(0.531)	(0.035)	0.00		0.115	
LDNO HV: HV Generation Intermittent	181	0	(0.360)			0.00		0.084	
LDNO HV: HV Generation Non-Intermittent	182	0	(2.284)	(0.354)	(0.022)	0.00		0.084	
LDNO HVplus: Domestic Unrestricted	50	1	0.651			1.36			
LDNO HVplus: Domestic Two Rate	51	2	0.806	0.027		1.36			
LDNO HVplus: Domestic Off Peak (related MPAN)	52	2	0.079						
LDNO HVplus: Small Non Domestic Unrestricted	53	3	0.663			1.47			
LDNO HVplus: Small Non Domestic Two Rate	54	4	0.807	0.049		1.47			
LDNO HVplus: Small Non Domestic Off Peak (related MPAN)	55	4	0.099						
LDNO HVplus: LV Medium Non-Domestic	56	5-8	0.645	0.026		12.60			
LDNO HVplus: LV Sub Medium Non-Domestic		5-8	0.712	0.035		6.63			
LDNO HVplus: HV Medium Non-Domestic		5-8	0.667	0.026		84.14			
LDNO HVplus: LV Network Domestic	209	0	3.663	0.264	0.023	1.36			
LDNO HVplus: LV Network Non-Domestic Non-CT	210	0	4.112	0.297	0.026	1.47			
LDNO HVplus: LV HH Metered	57	0	2.909	0.193	0.017	3.92	0.49	0.066	0.49
LDNO HVplus: LV Sub HH Metered	58	0	4.273	0.243	0.023	6.63	1.03	0.080	1.03
LDNO HVplus: HV HH Metered	59	0	4.228	0.204	0.020	84.14	1.19	0.074	1.19
LDNO HVplus: NHH UMS category A	45	8	0.435						
LDNO HVplus: NHH UMS category B	46	1	0.646						
LDNO HVplus: NHH UMS category C	47	1	1.195						
LDNO HVplus: NHH UMS category D	48	1	0.286						
LDNO HVplus: LV UMS (Pseudo HH Metered)	61	0	9.571	0.253	0.022				
LDNO HVplus: LV Generation NHH or Aggregate HH	62	8	(0.287)			0.00			
LDNO HVplus: LV Sub Generation NHH	63	8	(0.300)			0.00			
LDNO HVplus: LV Generation Intermittent	64	0	(0.287)			0.00		0.056	
LDNO HVplus: LV Generation Non-Intermittent	65	0	(1.806)	(0.285)	(0.019)	0.00		0.056	
LDNO HVplus: LV Sub Generation Intermittent	66	0	(0.300)			0.00		0.064	
LDNO HVplus: LV Sub Generation Non-Intermittent	67	0	(1.889)	(0.297)	(0.020)	0.00		0.064	
LDNO HVplus: HV Generation Intermittent	68	0	(0.360)			58.34		0.084	
LDNO HVplus: HV Generation Non-Intermittent	69	0	(2.284)	(0.354)	(0.022)	58.34		0.084	
LDNO EHV: Domestic Unrestricted	70	1	0.452			0.94			
LDNO EHV: Domestic Two Rate	71	2	0.560	0.018		0.94			
LDNO EHV: Domestic Off Peak (related MPAN)	72	2	0.055						
LDNO EHV: Small Non Domestic Unrestricted	73	3	0.461			1.02			
LDNO EHV: Small Non Domestic Two Rate	74	4	0.561	0.034		1.02			
LDNO EHV: Small Non Domestic Off Peak (related MPAN)	75	4	0.069						
LDNO EHV: LV Medium Non-Domestic	76	5-8	0.448	0.018		8.76			
LDNO EHV: LV Sub Medium Non-Domestic		5-8	0.495	0.025		4.61			
LDNO EHV: HV Medium Non-Domestic		5-8	0.464	0.018		58.49			
LDNO EHV: LV Network Domestic	211	0	2.546	0.184	0.016	0.94			
LDNO EHV: LV Network Non-Domestic Non-CT	212	0	2.858	0.206	0.018	1.02			
LDNO EHV: LV HH Metered	77	0	2.022	0.134	0.012	2.72	0.34	0.046	0.34
LDNO EHV: LV Sub HH Metered	78	0	2.970	0.169	0.016	4.61	0.72	0.056	0.72
LDNO EHV: HV HH Metered	79	0	2.939	0.142	0.014	58.49	0.82	0.051	0.82
LDNO EHV: NHH UMS category A	183	8	0.302						
LDNO EHV: NHH UMS category B	184	1	0.449						
LDNO EHV: NHH UMS category C	185	1	0.831						
LDNO EHV: NHH UMS category D	186	1	0.199						
LDNO EHV: LV UMS (Pseudo HH Metered)	81	0	6.653	0.176	0.015				
LDNO EHV: LV Generation NHH or Aggregate HH	82	8	(0.200)			0.00			
LDNO EHV: LV Sub Generation NHH	83	8	(0.209)			0.00			
LDNO EHV: LV Generation Intermittent	84	0	(0.200)			0.00		0.039	

Annex 4 - Charges applied to LDNOs with HV/LV end users

Tariff name	Unique billing identifier	PCs	Unit charge 1 (NHH) or red/black charge (HH) p/kWh	Unit charge 2 (NHH) or amber/yellow charge (HH) p/kWh	Green charge (HH) p/kWh	Fixed charge p/MPAN/day	Capacity charge p/kVA/day	Reactive power charge p/kVAh	Exceeded capacity charge p/kVA/day
LDNO EHV: LV Generation Non-Intermittent	85	0	(1.255)	(0.198)	(0.013)	0.00		0.039	
LDNO EHV: LV Sub Generation Intermittent	86	0	(0.209)			0.00		0.045	
LDNO EHV: LV Sub Generation Non-Intermittent	87	0	(1.313)	(0.207)	(0.014)	0.00		0.045	
LDNO EHV: HV Generation Intermittent	88	0	(0.250)			40.55		0.058	
LDNO EHV: HV Generation Non-Intermittent	89	0	(1.588)	(0.246)	(0.015)	40.55		0.058	
LDNO 132kV/EHV: Domestic Unrestricted	90	1	0.300			0.62			
LDNO 132kV/EHV: Domestic Two Rate	91	2	0.371	0.012		0.62			
LDNO 132kV/EHV: Domestic Off Peak (related MPAN)	92	2	0.036						
LDNO 132kV/EHV: Small Non Domestic Unrestricted	93	3	0.305			0.68			
LDNO 132kV/EHV: Small Non Domestic Two Rate	94	4	0.371	0.022		0.68			
LDNO 132kV/EHV: Small Non Domestic Off Peak (related MPAN)	95	4	0.046						
LDNO 132kV/EHV: LV Medium Non-Domestic	96	5-8	0.297	0.012		5.80			
LDNO 132kV/EHV: LV Sub Medium Non-Domestic		5-8	0.328	0.016		3.05			
LDNO 132kV/EHV: HV Medium Non-Domestic		5-8	0.307	0.012		38.74			
LDNO 132kV/EHV: LV Network Domestic	213	0	1.687	0.122	0.011	0.62			
LDNO 132kV/EHV: LV Network Non-Domestic Non-CT	214	0	1.893	0.137	0.012	0.68			
LDNO 132kV/EHV: LV HH Metered	97	0	1.339	0.089	0.008	1.80	0.22	0.030	0.22
LDNO 132kV/EHV: LV Sub HH Metered	98	0	1.967	0.112	0.011	3.05	0.48	0.037	0.48
LDNO 132kV/EHV: HV HH Metered	99	0	1.946	0.094	0.009	38.74	0.55	0.034	0.55
LDNO 132kV/EHV: NHH UMS category A	187	8	0.200						
LDNO 132kV/EHV: NHH UMS category B	188	1	0.297						
LDNO 132kV/EHV: NHH UMS category C	189	1	0.550						
LDNO 132kV/EHV: NHH UMS category D	190	1	0.132						
LDNO 132kV/EHV: LV UMS (Pseudo HH Metered)	101	0	4.407	0.117	0.010				
LDNO 132kV/EHV: LV Generation NHH or Aggregate HH	102	8	(0.132)			0.00			
LDNO 132kV/EHV: LV Sub Generation NHH	103	8	(0.138)			0.00			
LDNO 132kV/EHV: LV Generation Intermittent	104	0	(0.132)			0.00		0.026	
LDNO 132kV/EHV: LV Generation Non-Intermittent	105	0	(0.831)	(0.131)	(0.009)	0.00		0.026	
LDNO 132kV/EHV: LV Sub Generation Intermittent	106	0	(0.138)			0.00		0.030	
LDNO 132kV/EHV: LV Sub Generation Non-Intermittent	107	0	(0.870)	(0.137)	(0.009)	0.00		0.030	
LDNO 132kV/EHV: HV Generation Intermittent	108	0	(0.166)			26.86		0.039	
LDNO 132kV/EHV: HV Generation Non-Intermittent	109	0	(1.052)	(0.163)	(0.010)	26.86		0.039	
LDNO 132kV: Domestic Unrestricted	110	1	0.152			0.32			
LDNO 132kV: Domestic Two Rate	111	2	0.188	0.006		0.32			
LDNO 132kV: Domestic Off Peak (related MPAN)	112	2	0.018						
LDNO 132kV: Small Non Domestic Unrestricted	113	3	0.155			0.34			
LDNO 132kV: Small Non Domestic Two Rate	114	4	0.189	0.011		0.34			
LDNO 132kV: Small Non Domestic Off Peak (related MPAN)	115	4	0.023						
LDNO 132kV: LV Medium Non-Domestic	116	5-8	0.151	0.006		2.95			
LDNO 132kV: LV Sub Medium Non-Domestic		5-8	0.167	0.008		1.55			
LDNO 132kV: HV Medium Non-Domestic		5-8	0.156	0.006		19.67			
LDNO 132kV: LV Network Domestic	215	0	0.856	0.062	0.005	0.32			
LDNO 132kV: LV Network Non-Domestic Non-CT	216	0	0.961	0.069	0.006	0.34			
LDNO 132kV: LV HH Metered	117	0	0.680	0.045	0.004	0.92	0.11	0.015	0.11
LDNO 132kV: LV Sub HH Metered	118	0	0.999	0.057	0.005	1.55	0.24	0.019	0.24
LDNO 132kV: HV HH Metered	119	0	0.988	0.048	0.005	19.67	0.28	0.017	0.28
LDNO 132kV: NHH UMS category A	191	8	0.102						
LDNO 132kV: NHH UMS category B	192	1	0.151						
LDNO 132kV: NHH UMS category C	193	1	0.279						
LDNO 132kV: NHH UMS category D	194	1	0.067						
LDNO 132kV: LV UMS (Pseudo HH Metered)	121	0	2.238	0.059	0.005				
LDNO 132kV: LV Generation NHH or Aggregate HH	122	8	(0.067)			0.00			
LDNO 132kV: LV Sub Generation NHH	123	8	(0.070)			0.00			

Annex 4 - Charges applied to LDNOs with HV/LV end users

Tariff name	Unique billing identifier	PCs	Unit charge 1 (NHH) or red/black charge (HH) p/kWh	Unit charge 2 (NHH) or amber/yellow charge (HH) p/kWh	Green charge (HH) p/kWh	Fixed charge p/MPAN/day	Capacity charge p/kVA/day	Reactive power charge p/kVAh	Exceeded capacity charge p/kVA/day
LDNO 132kV: LV Generation Intermittent	124	0	(0.067)			0.00		0.013	
LDNO 132kV: LV Generation Non-Intermittent	125	0	(0.422)	(0.067)	(0.004)	0.00		0.013	
LDNO 132kV: LV Sub Generation Intermittent	126	0	(0.070)			0.00		0.015	
LDNO 132kV: LV Sub Generation Non-Intermittent	127	0	(0.442)	(0.069)	(0.005)	0.00		0.015	
LDNO 132kV: HV Generation Intermittent	128	0	(0.084)			13.64		0.020	
LDNO 132kV: HV Generation Non-Intermittent	129	0	(0.534)	(0.083)	(0.005)	13.64		0.020	
LDNO 0000: Domestic Unrestricted	130	1	0.048			0.10			
LDNO 0000: Domestic Two Rate	131	2	0.059	0.002		0.10			
LDNO 0000: Domestic Off Peak (related MPAN)	132	2	0.006						
LDNO 0000: Small Non Domestic Unrestricted	133	3	0.049			0.11			
LDNO 0000: Small Non Domestic Two Rate	134	4	0.059	0.004		0.11			
LDNO 0000: Small Non Domestic Off Peak (related MPAN)	135	4	0.007						
LDNO 0000: LV Medium Non-Domestic	136	5-8	0.047	0.002		0.92			
LDNO 0000: LV Sub Medium Non-Domestic		5-8	0.052	0.003		0.49			
LDNO 0000: HV Medium Non-Domestic		5-8	0.049	0.002		6.16			
LDNO 0000: LV Network Domestic	217	0	0.268	0.019	0.002	0.10			
LDNO 0000: LV Network Non-Domestic Non-CT	218	0	0.301	0.022	0.002	0.11			
LDNO 0000: LV HH Metered	137	0	0.213	0.014	0.001	0.29	0.04	0.005	0.04
LDNO 0000: LV Sub HH Metered	138	0	0.313	0.018	0.002	0.49	0.08	0.006	0.08
LDNO 0000: HV HH Metered	139	0	0.309	0.015	0.001	6.16	0.09	0.005	0.09
LDNO 0000: NHH UMS category A	195	8	0.032						
LDNO 0000: NHH UMS category B	196	1	0.047						
LDNO 0000: NHH UMS category C	197	1	0.087						
LDNO 0000: NHH UMS category D	198	1	0.021						
LDNO 0000: LV UMS (Pseudo HH Metered)	141	0	0.701	0.019	0.002				
LDNO 0000: LV Generation NHH or Aggregate HH	142	8	(0.021)			0.00			
LDNO 0000: LV Sub Generation NHH	143	8	(0.022)			0.00			
LDNO 0000: LV Generation Intermittent	144	0	(0.021)			0.00		0.004	
LDNO 0000: LV Generation Non-Intermittent	145	0	(0.132)	(0.021)	(0.001)	0.00		0.004	
LDNO 0000: LV Sub Generation Intermittent	146	0	(0.022)			0.00		0.005	
LDNO 0000: LV Sub Generation Non-Intermittent	147	0	(0.138)	(0.022)	(0.001)	0.00		0.005	
LDNO 0000: HV Generation Intermittent	148	0	(0.026)			4.27		0.006	
LDNO 0000: HV Generation Non-Intermittent	149	0	(0.167)	(0.026)	(0.002)	4.27		0.006	

Annex 5 – Schedule of Line Loss Factors

These line loss factors are illustrative based on the latest calculated values and are published in good faith. However, the line loss factors that are approved by the BSC Panel for the applicable year and consequently published on the Elexon website will take precedence and be used in Settlement if they differ from these values.

Northern Powergrid (Northeast) Ltd - Illustrative LLFs for year beginning 1 April 2017				
Time periods	Period 1	Period 2	Period 3	Period 4
Monday – Friday (Apr-Oct)			00:30 – 07:30	00:00 – 00:30 07:30 – 24:00
Monday – Friday (Nov)		07:30 – 20:00	00:30 – 07:30	00:00 – 00:30 20:00 – 24:00
Monday – Friday (Dec – Feb)	16:30 – 18:30	07:30 – 16:30 18:30 – 20:00	00:30 – 07:30	00:00 – 00:30 20:00 – 24:00
Monday – Friday (Mar)			00:30 – 07:30	00:00 – 00:30 07:30 – 24:00
Saturday and Sunday All Year			00:30 – 07:30	00:00 – 00:30 07:30 – 24:00
Notes	All the above times are in UK Clock time			

Generic demand and generation LLFs					
Metered voltage, respective periods and associated LLFCs					
Metered voltage	Period 1	Period 2	Period 3	Period 4	Associated LLFC
Low Voltage Network	1.104	1.093	1.071	1.081	1, 12, 2, 203, 204, 205, 249, 251, 257, 278, 506, 507, 508, 509, 554, 555, 774, 792, 794, 998, 999
Low Voltage Substation	1.039	1.038	1.039	1.037	265, 293, 776, 793, 795
High Voltage Network	1.024	1.023	1.016	1.019	301, 304, 796, 798
High Voltage Substation	1.014	1.014	1.011	1.012	691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 777, 778, 779, 780, 781
Greater than 22kV connected - generation	1.009	1.008	1.005	1.007	787, 788, 789, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825
Greater than 22kV connected - demand	1.009	1.008	1.005	1.007	547, 548, 549, 560, 561, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579

EHV site specific LLFs					
Demand					
Site	Period 1	Period 2	Period 3	Period 4	Associated LLFC
Site 1	1.006	1.005	1.005	1.005	601
Site 2	1.002	1.002	1.002	1.002	603
Site 3	1.002	1.003	1.002	1.002	604
Site 4	1.015	1.013	1.017	1.014	605
Site 5	1.016	1.018	1.045	1.021	606
Site 6	1.023	1.024	1.044	1.025	607
Site 7	1.048	1.043	1.079	1.043	608
Site 8	1.006	1.005	1.007	1.006	609
Site 9	1.017	1.016	1.015	1.016	611
Site 10	1.007	1.012	1.004	1.004	612
Site 11	1.050	1.034	1.018	1.016	613
Site 12	1.010	1.009	1.008	1.008	614
Site 13	1.004	1.004	1.004	1.004	615
Site 14	1.004	1.004	1.004	1.004	616
Site 15	1.006	1.006	1.006	1.006	617
Site 16	1.012	1.012	1.011	1.012	618
Site 17	1.016	1.014	1.010	1.013	619
Site 18	1.000	1.000	1.000	1.000	620
Site 19	1.019	1.019	1.051	1.028	621
Site 20	1.025	1.020	1.024	1.020	622
Site 21	1.007	1.007	1.007	1.007	624
Site 22	1.017	1.017	1.016	1.016	625
Site 23	1.008	1.006	1.006	1.006	627
Site 24	1.152	1.068	1.025	1.027	626
Site 25	1.019	1.019	1.014	1.016	628
Site 26	1.008	1.008	1.008	1.008	631
Site 27	1.006	1.006	1.006	1.006	632
Site 28	1.021	1.020	1.018	1.019	633
Site 29	1.010	1.009	1.009	1.009	637
Site 30	1.094	1.085	1.077	1.082	680

Annex 5 – Schedule of Line Loss Factors

Site 31	1.050	1.052	1.041	1.046	681
Site 32	1.007	1.005	1.005	1.005	544
Site 33	1.003	1.003	1.003	1.003	682
Site 34	1.000	1.000	1.024	1.021	683
Site 35	1.007	1.008	1.008	1.007	684
Site 36	1.007	1.007	1.006	1.007	685
Site 37	1.002	1.002	1.008	1.024	686
Site 38	1.014	1.014	1.011	1.012	687
Site 39	1.041	1.040	1.032	1.032	688
Site 40	1.187	1.179	1.163	1.155	689
Site 41	1.100	1.111	1.110	1.108	690
Site 42	1.028	1.013	1.017	1.013	540
Site 43	1.004	1.004	1.003	1.003	541
Site 44	1.001	1.001	1.001	1.001	542
Site 45	1.014	1.008	1.011	1.011	543
Site 46	1.009	1.008	1.005	1.007	545
Site 47	1.009	1.008	1.005	1.007	563
Site 48	1.009	1.008	1.005	1.007	562

EHV site specific LLFs					
Generation					
Site	Period 1	Period 2	Period 3	Period 4	Associated LLFC
Site 1	1.000	0.997	0.997	0.997	701
Site 2	0.998	0.998	0.997	0.997	727
Site 3	1.003	1.003	1.002	1.003	704
Site 4	0.993	0.993	0.994	0.994	709
Site 5	1.020	1.019	1.011	1.015	710
Site 6	0.988	0.990	0.979	0.986	711
Site 7	1.022	1.020	1.003	1.008	748
Site 8	0.999	0.997	0.996	0.996	729
Site 9	1.009	1.008	1.005	1.007	728
Site 10	1.012	1.010	1.004	1.009	759
Site 11	0.996	0.996	0.990	0.991	760
Site 12	1.001	0.999	0.998	0.998	761
Site 13	1.003	1.003	1.002	1.003	762
Site 14	0.970	0.970	0.973	0.977	763
Site 15	0.995	0.994	0.993	0.995	764
Site 16	0.999	0.998	0.997	0.998	765
Site 17	0.998	0.998	0.998	0.998	766
Site 18	1.046	1.041	1.032	1.034	767
Site 19	1.043	1.039	1.029	1.031	768
Site 20	1.002	1.004	0.998	1.002	782
Site 21	1.000	1.000	0.995	0.999	783
Site 22	1.003	1.003	1.002	1.003	784
Site 23	0.999	0.999	0.999	0.999	785
Site 24	1.009	1.008	1.005	1.007	802
Site 25	1.009	1.008	1.005	1.007	769

Annex 6 - New Designated EHV Properties. Addendum to Schedule of Charges for use of the Distribution System by Designated EHV Properties (including LDNOs with Designated EHV Properties/end-users)