

## **SP Manweb**

# **Use of System Charging Statement**

## **NOTICE OF CHARGES**

Effective from 1st April 2020

Version 0.1

This statement is in a form to be approved by the Gas and Electricity Markets Authority.

# **Version Control**

Version	Date	Description of version and any changes made

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

3 PRENTON WAY, BIRKENHEAD, MERSEYSIDE CH43 3ET

# **Contents**

1. Introduction	5
Validity period	6
Contact details	6
<ul><li>1.14. For all other queries please contact our general enquiries telephone number:</li><li>0330 10 10 4444</li></ul>	7
2. Charge application and definitions	8
The supercustomer and site-specific billing approaches	8
Supercustomer billing and payment	9
Site-specific billing and payment Incorrectly allocated charges	10 16
Generation charges for pre-2005 designated EHV properties	17
Provision of billing data	18
Out of area use of system charges	18 18
Licensed distribution network operator charges Licence exempt distribution networks	19
3. Schedule of charges for use of the distribution system	21
4. Schedule of line loss factors	22
Role of line loss factors in the supply of electricity	22
Calculation of line loss factors	22
Publication of line loss factors  5. Notes for Designated EHV Properties	23 24
EDCM network group costs	24
Charges for new Designated EHV Properties	24
Charges for amended Designated EHV Properties	24
Demand-side management  6. Electricity distribution rebates	24 26
•	
7. Accounting and administration services	26
8. Charges for electrical plant provided ancillary to the grant of use of system	26
Appendix 1 - Glossary	27
Appendix 2 - Guidance notes	35
Background Meter point administration	35 35
Your charges	37
Reducing your charges	37
Reactive power and reactive power charges Site-specific EDCM charges	38 38
Annex 1 - Schedule of charges for use of the distribution system by LV and HV	30
Designated Properties	41
Annex 2 - Schedule of charges for use of the distribution system by Designated EHV	
Properties (including LDNOs with Designated EHV Properties/end-users)	42
Annex 3 - Schedule of charges for use of the distribution system by preserved/additional	
LLF classes	48
Annex 4 - Charges applied to LDNOs with LV and HV end-users	49
Annex 5 - Schedule of line loss factors	53
Annex 6 - Charges for New or Amended Designated EHV Properties	54

#### 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 charges<sup>1</sup> for the use of our Distribution System and to provide the schedule of Line Loss Factors<sup>2</sup> 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.
- Within this statement we use terms such as 'Users' and 'Customers' as well as 1.2. 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 following methodologies as per the Distribution Connection and Use of System Agreement (DCUSA)<sup>3</sup>:
  - Common Distribution Charging Methodology (CDCM); for Low Voltage (LV) and High Voltage (HV) Designated Properties as per DCUSA Schedule 16; and
  - Extra High Voltage (EHV) Distribution Charging Methodology (EDCM); for Designated EHV Properties as per DCUSA Schedule 17.
- 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 premises 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 premises is provided in the guidance notes in Appendix 2.

PAGE **5** OF **54** SP MANWEB PLC **DECEMBER 2018 V0.1** 

<sup>&</sup>lt;sup>1</sup> Charges can be positive or negative.

<sup>&</sup>lt;sup>2</sup> Known as adjustment factors in the Distribution Licence and commonly referred to as Loss Adjustment Factors. The schedule of Line Loss Factors will be provided in a revised statement shortly after the Line Loss Factors for the relevant year have been successfully audited by Elexon.

The Distribution and Connection Use of System Agreement (DCUSA) available from

http://www.dcusa.co.uk/SitePages/Documents/DCUSA-Document.aspx

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

https://www.scottishpower.com/pages/connections use of system and met

ering services.aspx

Validity period

1.8. This charging statement is valid for services provided from the effective date

stated on the front of the statement and remains valid until updated by a revised

version or superseded by a statement with a later effective date.

1.9. When using this charging statement, care should be taken to ensure that the

relevant 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

https://www.scottishpower.com/pages/connections use of system and meteri

ng services.aspx

**Contact details** 

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

address:

SP Energy Networks, Network Planning & Regulation

Prenton Way

Birkenhead

Merseyside

**CH43 3ET** 

Email: Commercial@spenergynetworks.co.uk

Telephone: 0141 614 1605

1.12. All enquiries regarding reductions to existing maximum capacities should be

addressed to:

SP Energy Networks, Network Planning and Regulation

55 Fullarton Drive

Cambuslang Investment Park

Glasgow

G32 8FA

Email: CAPACITYQ@spenergynetworks.co.uk

1.13. All enquiries regarding connection agreements and increases to maximum capacities should be addressed to:

Manweb

SP Energy Networks

**Network Connections** 

PO BOX 290

Lister Drive

Liverpool

L13 7HJ

Tel: 0845 270 0783

Email:gettingconnected@scottishpower.com

1.14. For all other queries please contact our general enquiries telephone number: 0330 10 10 4444

#### 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.

#### The supercustomer and site-specific billing approaches

- 2.2. We utilise two billing approaches depending on the type of metering data received:
  - (a) The 'Supercustomer' approach for Customers for whom we receive aggregated consumption data through Settlement; and
  - (b) The 'Site-specific' approach for Customers for whom we receive sitespecific consumption data through Settlement.
- 2.3. We receive aggregated consumption data through Settlement for:
  - (a) Domestic and non-domestic Customers for whom Non-Half Hourly (NHH) metering data is used in Settlement (i.e. Customers with MPANs which are registered to Measurement Class A);
  - (b) Customers which are unmetered and are not settled as pseudo Half Hourly (HH) metered (i.e. Customers with MPANs which are registered to Measurement Class B);
  - (c) Domestic Customers for whom HH metering data is used in Settlement (i.e. Customers with MPANs which are registered to Measurement Class F); and
  - (d) Non-domestic Customers for whom HH metering data is used in Settlement and which have whole current (WC) metering (i.e. Customers with MPANs which are registered to Measurement Class G).
- 2.4. We receive site specific consumption data through Settlement for:
  - (a) Non-domestic Customers for whom HH metering data is used in Settlement and which have current transformer (CT) metering (i.e. Customers with MPANs which are registered to measurement class C or E); and
  - (b) Customers which are unmetered and settled as pseudo HH metered (i.e. Customers with MPANs which are registered to measurement class D).

#### Supercustomer billing and payment

- 2.5. The Supercustomer approach makes use of aggregated data obtained from Suppliers using the 'Aggregated Distribution Use of System (DUoS) Report' data flow.
- 2.6. 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.
- 2.7. The charges are applied on the basis of the LLFC assigned to the MPAN, and the units consumed within the time periods specified in this statement. These time periods are not the same as those indicated by the Time Pattern Regime (TPR) assigned to the Standard Settlement Configuration (SSC). All LLFCs are assigned at our sole discretion, based on the tariff application rules set out in the appropriate charging methodology or elsewhere in this statement. Please refer to the section 'Incorrectly allocated charges' if you believe the allocated LLFC or tariff is incorrect.

#### Supercustomer charges

- 2.8. 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.
- 2.9. Users who wish to supply electricity to Customers for whom we receive aggregated data through Settlement (see paragraph 2.3) will be allocated the relevant charge structure set out in Annex 1.
- 2.10. Identification of the appropriate charge can be made by cross-reference to the LLFC.
- 2.11. Valid Settlement Profile Class (PC)/Standard Settlement Configuration (SSC)/Meter Timeswitch Code (MTC) combinations for LLFCs where the Metering System is Measurement Class A or B are detailed in Market Domain Data (MDD).

- 2.12. Where an MPAN has an invalid Settlement combination, the 'Domestic Unrestricted' fixed and unit charges will be applied as default until the invalid combination is corrected. Where there are multiple SSC/TPR combinations, the default 'Domestic Unrestricted' fixed and unit charges will be applied for each invalid SSC/TPR combination.
- 2.13. The time periods for unit charges where the Metering System is Measurement Class A or B are as specified by the SSC. To determine the appropriate charge rate for each SSC/TPR a lookup table is provided in the spreadsheet that accompanies this statement<sup>4</sup>.
- 2.14. The time periods for unit charges where the Metering System is Measurement Class F or G are set out in the table 'Time Bands for Half Hourly Metered Properties' in Annex 1.
- 2.15. 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

- 2.16. The site-specific billing and payment approach makes use of HH metering data at premises level received through Settlement.
- 2.17. Invoices are calculated on a periodic basis and sent to each User for whom we transport electricity through our Distribution System. Where an account is based on estimated data, the account shall be subject to any adjustment that may be necessary following the receipt of actual data from the User.
- 2.18. The charges are applied on the basis of the LLFCs assigned to the MPAN (or the (MSID) for Central Volume Allocation (CVA) sites), and the units consumed within the time periods specified in this statement.
  - 2.19. All LLFCs are assigned at our sole discretion, based on the tariff application rules set out in the appropriate charging methodology or elsewhere in this statement. Please refer to the section 'Incorrectly allocated charges' if you believe the allocated LLFC or tariff is incorrect. Where an incorrectly applied LLFC is identified, we may at our sole discretion apply the correct LLFC and/or charges. SPD - Schedule of charges and other tables - 2020 21 V.0.1

**DECEMBER 2018 V0.1** 

SP MANWEB PLC

<sup>&</sup>lt;sup>4</sup> SPM - Schedule of charges and other tables - 2020\_21 V.0.1

#### Site-specific billed charges

- 2.20. Site-specific billed charges may include the following components:
  - a fixed charge, pence/MPAN/day or pence/MSID/day;
  - a capacity charge, pence/kilovolt-ampere (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/kilovolt-ampere reactive hour (kVArh), for each unit in excess of the reactive charge threshold.
- 2.21. Users who wish to supply electricity to Customers for whom we receive site-specific data through Settlement (see paragraph 2.4) will be allocated the relevant charge structure dependent upon the voltage and location of the Metering Point.
- 2.22. Fixed charges are generally levied on a pence per MPAN/MSID per day basis.
- 2.23. LV and HV Designated Properties will be charged in accordance with the CDCM and allocated the relevant charge structure set out in Annex 1.
- 2.24. For LV and HV Designated Properties that utilise a combination of Intermittent and Non-Intermittent generation technologies metered through a single MPAN/MSID, we will allocate the tariff based on the dominant technology. The dominant technology will have a higher combined installed capacity as evidenced in ratings contained in the Connection Agreement.
- 2.25. Designated EHV Properties will be charged in accordance with the EDCM and allocated the relevant charge structure set out in Annex 2.
- 2.26. 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.
- 2.27. Due to the seasonal nature of charges for Unmetered Supplies, changes between Measurement Classes B and D (or vice versa) shall not be agreed except with effect from 1 April in any charging year.

#### Time periods

- 2.28. 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.
- 2.29. 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.
- 2.30. The time periods for the application of unit charges to Unmetered Supply Exit Points 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

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

#### Chargeable capacity

- 2.32. The chargeable capacity is, for each billing period, the MIC/MEC, as detailed below.
- 2.33. 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.
- 2.34. Reductions to the MIC/MEC may only be permitted once in a 12 month period. Where the MIC/MEC is reduced the new lower level will be agreed with reference to the level of the Customer's maximum import and/or export demand respectively. 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.
- 2.35. In the absence of an agreement, the chargeable capacity, save for error or omission, will be based on the last MIC/MEC that we have previously agreed for the relevant premises' connection. A Customer can seek to agree or vary the MIC/MEC by contacting us using the contact details in section 1.12.

#### Exceeded capacity

2.36. 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 billing period in which the breach occurs.

#### Demand exceeded capacity

Demandexceeded capacity =  $max(2 \times \sqrt{AI^2 + max(RI, RE)^2} - MIC, 0)$ 

Where:

AI = Active import (kWh)

RI = Reactive import (kVArh)

RE = Reactive export (kVArh)

MIC = Maximum import capacity (kVA)

- 2.37. Only reactive import and reactive export values occurring at times of active import are used in the calculation. For sites which are importing and exporting in the same half hour, i.e. where active import is not equal to zero and active export is not equal to zero, use zero for reactive import and reactive export when calculating capacity taken.
- 2.38. This calculation is completed for every half hour and the maximum value from the billing period is applied.

#### Generation exceeded capacity

Generation exceeded capacity =  $max(2 \times \sqrt{AE^2 + max(RI, RE)^2} - MEC, 0)$ 

Where:

AE = Active export (kWh)

RI = Reactive import (kVArh)

RE = Reactive export (kVArh)

MEC = Maximum export capacity (kVA)

2.39. 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. For sites which are importing and exporting in the same half hour, i.e. where active import is not equal to zero and active export is not equal to zero, use zero for reactive import and reactive export when calculating capacity taken.

2.40. 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

2.41. Where standby capacity charges are applied, the charge will be set at the same rate as that applied to normal MIC. Should a Customer's request for additional security of supply require the provision of capacity from two different sources, we reserve the right to charge for the capacity held at each source.

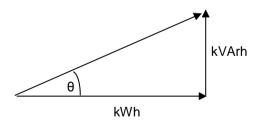
#### Minimum capacity levels

2.42. There is no minimum capacity threshold.

#### Application of charges for excess reactive power

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

 $Cos \theta = Power Factor$ 



2.45. The chargeable reactive power is calculated as follows:

#### Demand chargeable reactive power

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

Where:

AI = Active import (kWh)

RI = Reactive import (kVArh)

RE = Reactive export (kVArh)

- 2.46. Only reactive import and reactive export values occurring at times of active import are used in the calculation. For sites which are importing and exporting in the same half hour i.e. where active import is not equal to zero and active export is not equal to zero, no calculation for that half hour is made and the result for that half hour would be zero.
- 2.47. The square root calculation will be to two decimal places.
- 2.48. This calculation is completed for every half hour and the values summated over the billing period.

#### Generation chargeable reactive power

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

Where:

AE = Active export (kWh)

RI = Reactive import (kVArh)

RE = Reactive export (kVArh)

- 2.49. Only reactive import and reactive export values occurring at times of active export are used in the calculation. For sites which are importing and exporting in the same half hour i.e. where active import is not equal to zero and active export is not equal to zero, no calculation for that half hour is made and the result for that half hour would be zero.
- 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.

#### **Incorrectly allocated charges**

- 2.52. It is our responsibility to apply the correct charges to each MPAN/MSID. The allocation of charges is based on the voltage of connection, import/export details including multiple MPANs, metering information and, for some tariffs, the metering location. Where an MPAN/MSID is used for export purposes in relation to an LV or HV Designated Property, the type of generation (Intermittent or Non-Intermittent) also determines the allocation of charges.
- 2.53. We are responsible for deciding the voltage of connection. Generally, this is determined by where the metering is located and where responsibility for the electrical equipment transfers from us to the connected Customer.
- 2.54. The Supplier determines and provides us with the metering information and data. This enables us to allocate charges where there is more than one charge per voltage level. The metering information and data is likely to change over time if, for example, a Supplier changes from a two rate meter to a single rate meter. When we are notified this has happened we will change the allocation of charges accordingly.
- 2.55. If it has been identified that a charge may have been incorrectly allocated due to the metering information and/or data then a request for investigation should be made to the Supplier.
- 2.56. Where it has been identified that a charge may have been incorrectly allocated due to the voltage of connection, import/export details or metering location then a request to investigate the applicable charges should be made to us. Requests from persons other than the Customer or the current Supplier must be accompanied by a Letter of Authority from the Customer; the current Supplier must also acknowledge that they are aware a request has been made. Any request must be supported by an explanation of why it is believed that the current charge should be changed, along with supporting information including, where appropriate, photographs of metering positions or system diagrams. Any request to change the current charge that also includes a request for backdating must include justification as to why it is considered appropriate to backdate the change.
- 2.57. An administration charge (covering our reasonable costs) may be made if a technical assessment or site visit is required, but we will not apply any charge where we agree to the change request.

- 2.58. Where we agree that the current LLFC/charge should be changed, we will then allocate the appropriate set of charges for the connection. Any adjustment will be applied from the date of the request, back to either 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 from the date of request, and the Prescription and Limitation (Scotland) Act 1973, which covers a five year period from the date of request; whichever is the shorter.
- 2.59. Any credit or additional charge will be issued to the relevant Supplier(s) effective during the period of the change.
- 2.60. Should we reject the request (as per paragraph 2.56) a justification will be provided to the requesting party. We shall not unreasonably withhold or delay any decision on a request to change the charges applied and would expect to confirm our position on the request within three months of the date of request.

#### Generation charges for pre-2005 designated EHV properties

- 2.61. Designated EHV Properties that were connected to the Distribution System under a pre-2005 connection charging policy are eligible for exemption from Use of System (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 Connection Agreements dated prior to 1st April 2005, and for which 25 years has passed since their first energisation/connection date will receive UoS charges for generation 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 us that they wish to opt in to UoS charges for generation.

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

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

#### Provision of billing data

- 2.63. Where HH metering data is required for UoS charging and this is not provided in accordance with the BSC or DCUSA, such metering data shall be provided to us by the User of the system in respect of each calendar month within five working days of the end of that calendar month.
- 2.64. The metering data shall identify the amount of energy conveyed across the Metering System 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.
- 2.65. 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<sup>5</sup> (as agreed with us). The data shall be emailed to UoS ADMINISTRATORS@spenergynetworks.co.uk
- 2.66. 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

2.67. We do not operate networks outside our Distribution Services Area.

#### Licensed distribution network operator charges

- 2.68. Licensed Distribution Network Operator (LDNO) charges are applied to LDNOs who operate Embedded Networks within our Distribution Services Area.
- 2.69. 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 our Distribution System. The relevant charge structures are set out in Annex 4.
- 2.70. Where a NHH metered MPAN has an invalid Settlement combination, the 'LDNO LV: Domestic Unrestricted' fixed and unit charges will be applied as

\_

<sup>&</sup>lt;sup>5</sup> MRA Data Transfer Catalogue available from https://dtc.mrasco.com/

- default until the invalid combination is corrected. Where there are multiple SSC/TPR combinations, the default 'LDNO LV: Domestic Unrestricted' fixed and unit charges will be applied for each invalid SSC/TPR combination.
- 2.71. 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.
- 2.72. For Nested Networks the relevant charging principles set out in DCUSA Schedule 21 will apply.

#### Licence exempt distribution networks

- 2.73. The Electricity and Gas (Internal Market) Regulations 2011<sup>6</sup> 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.
- 2.74. 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.
- 2.75. Licence exempt distribution networks owners can provide third party access using either full settlement metering or the difference metering approach.

#### Full settlement metering

- 2.76. 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 licence exempt distribution network.
- 2.77. In this approach our UoS charges will be applied to each MPAN.

#### Difference metering

2.78. 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 premises. Under this approach, the Customers requiring third party access on

<sup>&</sup>lt;sup>6</sup> The Electricity and Gas (Internal Market) Regulations 2011 available from http://www.legislation.gov.uk/uksi/2011/2704/contents/made

the licence exempt distribution network will have their own MPAN and must have a HH Metering System.

#### **Gross settlement**

- 2.79. Where one of our MPANs prefix is embedded within a licence exempt distribution network connected to our Distribution System, and 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.
- 2.80. 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 or D0275 MRA data flow;
  - the text file shall be emailed to uosadminsrators@spenergynetworks.co.uk;
  - the title of the email should also contain the phrase "gross data for difference metered private network" and contain the metering reference specified by us in place of the Settlement 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".
- 2.81. 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 use of our Distribution System 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 <a href="https://www.scottishpower.com/pages/connections use of system and metering services.aspx">https://www.scottishpower.com/pages/connections use of system and metering services.aspx</a>
- 3.3. Annex 1 contains the charges applied to LV and HV Designated Properties.
- 3.4. Annex 2 contains the charges applied to our Designated EHV Properties and charges applied to LDNOs for Designated EHV Properties connected to their Distribution Systems.
- 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 to their Distribution Systems.
- 3.7. Annex 4 contains the charges applied to LV and HV Designated Properties that are embedded in an Exempt Distribution Network where Net Settlement of metered data is applied.

#### 4. Schedule of line loss factors

#### Role of line loss factors in the supply of electricity

- Electricity entering or exiting our Distribution System is adjusted to take account 4.1. of energy that is lost<sup>7</sup> 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.
- 4.3. LLFs are used to adjust the Metering System volumes to take account of losses on the Distribution System.

#### Calculation of line loss factors

- 4.4. LLFs are calculated in accordance with BSCP128 which sets out the procedure and principles with 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 or 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.
- The Elexon website<sup>8</sup> contains more information on LLFs. 4.7.

<sup>&</sup>lt;sup>7</sup> 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

<sup>&</sup>lt;sup>8</sup> The following page has links to BSCP128 and to our LLF methodology: http://www.elexon.co.uk/reference/technicaloperations/losses/

#### **Publication of line loss factors**

- 4.8. The LLFs used in Settlement are published on the Elexon Portal<sup>9</sup>. The website contains the LLFs in standard industry data formats and in a summary form. A user guide with details on registering and using the portal is also available.
- 4.9. 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. As this statement is published a complete year before the LLFs for the charging year have been produced, Annex 5 is intentionally left blank. This statement will be reissued with Annex 5 populated once the LLFs have been calculated and audited. This should typically be more than three months prior to the statement coming into force.
- 4.11. When using the tables in Annex 5, reference should be made to the LLFC allocated to the MPAN to find the appropriate values.

<sup>&</sup>lt;sup>9</sup> The Elexon Portal can be accessed from www.elexonportal.co.uk

#### 5. Notes for Designated EHV Properties

#### **EDCM** network group costs

- 5.1. A table is provided in the accompanying spreadsheet which shows the underlying Forward Cost Pricing (FCP) network group costs used to calculate the current EDCM charges. This spreadsheet "SPM Schedule of Charges and Other Tables xlsx" is available to download from our website.
- 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 on our website in an addendum to that statement as and when necessary. The addendum will include charge information of the type found in Annex 2, and LLFs as found in Annex 5.
- 5.4. The form of the addendum is detailed in Annex 6 to this statement.
- 5.5. The new Designated EHV Properties' charges will be added to Annex 2 in the next full statement released.

#### **Charges for amended Designated EHV Properties**

5.6. Where an existing Designated EHV Property is modified and energised in the charging year, we may revise the EDCM charges for the modified Designated EHV Property. If revised charges are appropriate, an addendum will be sent to all relevant 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**

5.7. New or existing Designated EHV Property Customers may wish to offer part of their MIC to be interruptible by us (for active network management purposes other than normal planned or unplanned outages) in order to benefit from any reduced UoS charges calculated using the EDCM.

- 5.8. Several options exist in which we may agree for some or the entire MIC to be interruptible. Under the EDCM the applicable demand capacity costs would be based on the MIC minus the capacity subject to interruption.
- 5.9. If you are interested in making part or all of your MIC interruptible as an integral irrevocable feature of a new connection or modification to an existing connection you should in the first instance contact our connections function;

• By email to: <a href="mailto:gettingconnected@scottishpower.com">gettingconnected@scottishpower.com</a>

• By telephone: 0845 270 0783

By address:

Manweb

SP Energy Networks

PO BOX 290

Lister Drive

Liverpool

L13 7HJ

#### 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 version 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. "None"

## Appendix 1 - Glossary

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 <a href="https://www.elexon.co.uk/ELEXON">www.elexon.co.uk/ELEXON</a> <a href="mailto:Documents/trading_arrangements.pdf">Documents/trading_arrangements.pdf</a> .
Balancing and Settlement Code Procedure (BSCP)	A document of that title, as established or adopted and from time to time modified by the Panel in accordance with The Code, setting out procedures to be complied with (by Parties, Party Agents, BSC Agents, BSCCo, the Panel and others) in, and other matters relating to, the implementation of The Code;
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.
Connection Agreement	An agreement between an LDNO and a Customer which provides that that Customer has the right for its connected installation to be and remain directly or indirectly connected to that LDNO's Distribution System
Central Volume Allocation (CVA)	As defined in the BSC.
0	A person to whom a User proposes to supply, or for the time being supplies, electricity through an exit point, or from who, 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;
Customer	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 13B of the Electricity Distribution Licence.

Term	Definition
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 of Great Britain.  It is a requirement that all licensed electricity distributors and
(DCUSA)	It is a requirement that all licensed electricity distributors an suppliers become parties to the DCUSA.

Term	Defin	ition	
	MPAI	e are unique IDs that can be u N, to identify your LDNO. The ators can be found on their we	charges for other network
	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
Distributor IDs	21	South Wales	Western Power Distribution
Distributor 120	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
	30	All	Peel Electricity Networks Ltd
	31	All	UK Power Distribution Ltd
	32	All	Energy Assets Networks Limited
	33	All	Eclipse Power Networks Ltd
	34	All	Murphy Power Distribution Ltd
	35	All	Fulcrum Electricity Assets Ltd
	36	All	Vattenfall Networks Ltd

Term	Definition
Distribution Network Operator (DNO)	An electricity distributor that 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.
	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:
	<ul> <li>Grid Supply Points or generation sets or other entry points</li> </ul>
	to the points of delivery to:
Distribution System	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)
	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.
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 Network	An electricity Distribution System operated by an LDNO and embedded within another Distribution System.
Engineering Recommendation P2/6	A document of the Energy Networks Association, which defines planning standards for security of supply and is referred to in Standard Licence Condition 24 of our Electricity Distribution Licence.
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).

Term	Definition
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.
Grid Supply Point (GSP)	A metered connection between the National Grid Electricity Transmission 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.
Intermittent Generation	Defined in DCUSA Schedule 16 as a generation plant where the energy source of the prime mover cannot be made available on demand, in accordance with the definitions in Engineering Recommendation P2/6.
Invalid Settlement Combination	A Settlement combination that is not recognised as a valid combination in market domain data - see <a href="https://www.elexonportal.co.uk/MDDVIEWER">https://www.elexonportal.co.uk/MDDVIEWER</a> .
kVA	Kilovolt ampere.
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 to distribute electricity.
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	$= \frac{annual\ consumption\ (kWh)}{maximum\ demand\ (kW) \times hours\ in\ year}$
Low Voltage (LV)	Nominal voltages below 1kV.

Term	Definition	
Market Domain Data (MDD)	MDD is a central repository of reference data available to 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.	
Measurement Class	<ul> <li>A classification of Metering Systems used in the BSC which indicates how consumption is measured, i.e.:</li> <li>Measurement Class A – non-half hourly metering equipment;</li> <li>Measurement Class B – non-half hourly unmetered supplies;</li> <li>Measurement Class C – half hourly metering equipment at or above 100kW premises;</li> <li>Measurement Class D – half hourly unmetered supplies;</li> <li>Measurement Class E – half hourly metering equipment below 100kW premises with CT;</li> <li>Measurement Class F – half hourly metering equipment at below 100kW premises with CT or whole current, and at domestic premises; and</li> <li>Measurement Class G – half hourly metering equipment at below 100kW premises with whole current and not at domestic premises.</li> </ul>	
Meter Timeswitch Code (MTC)	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.	
Metering Point	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'.	
Metering Point Administration Number (MPAN)	A number relating to a Metering Point under the MRA.	
Metering System	Particular commissioned metering equipment installed for the purposes of measuring the quantities of exports and/or imports at the exit point or entry point.	

Term	Definition	
Metering System Identifier (MSID)	MSID is a term used throughout the BSC and its subsidiary documents and has the same meaning as MPAN as used under the MRA.	
Master Registration Agreement (MRA)	The Master Registration Agreement (MRA) provides a governance mechanism to manage the processes established between electricity suppliers and distribution companies to enable electricity suppliers to transfer customers. It includes terms for the provision of Metering Point Administration Services (MPAS) Registrations.	
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).	
Non-Intermittent Generation	Defined in DCUSA Schedule 16 as a generation plant where the energy source of the prime mover can be made available on demand, in accordance with the definitions in Engineering Recommendation P2/6.	
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 licence responsible for electricity supplied to and/or exported from a metering point.	
Supplier Volume Allocation (SVA)	As defined in the BSC.	

Term	Definition
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 <sup>10</sup> .
Use of System Charges	Charges which are applicable to those parties which use the Distribution System.
User	Someone that has a use of system agreement with the DNO e.g. a supplier, generator or other LDNO.

\_

<sup>&</sup>lt;sup>10</sup> Balancing and Settlement Code Procedures are available from <a href="http://www.elexon.co.uk/pages/bscps.aspx">http://www.elexon.co.uk/pages/bscps.aspx</a>

## Appendix 2 - Guidance notes<sup>11</sup>

#### **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 premises 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

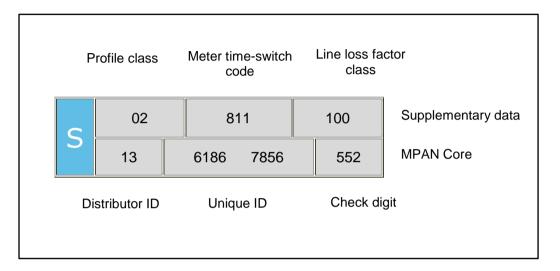
- 1.5. We are responsible for managing the electricity supply points that are connected to our Distribution System. Typically, every supply point is identified by a Meter Point Administration Number (MPAN). A few supply points may have more than one MPAN depending on the metering configuration (e.g. a school which may have an MPAN for the main supply and an MPAN for catering).
- 1.6. The full MPAN is a 21 digit number, preceded by an 'S' and includes supplementary data. The MPAN 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 premises.

\_

<sup>&</sup>lt;sup>11</sup> 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 MPAN diagram



- 1.8. Generally, you will only need to know the Distributor ID and LLFC to identify the distribution charges for your premises. However, there are some premises where charges are specific to that site. In these instances, the charges are identified by the MPAN core. The Distributor ID for SP Manweb is 13. 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 or 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 13 are provided in this statement.
- 1.13. You can identify your charges by referencing your LLFC, 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 may be contained in Annex 3 or Annex 6. When identifying charges in Annex 2, please note that some LLFCs have more than one charge. In this instance you will need to select the correct charge by cross referencing with the MPAN core 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 <a href="https://www.scottishpower.com/pages/connections use of system and metering services.aspx">https://www.scottishpower.com/pages/connections use of system and metering services.aspx</a>

### 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 peak periods and generation credits more beneficial during peak periods, 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 (kVArh) 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 one of two approved approaches: Long Run Incremental Cost

- (LRIC) or Forward Cost Pricing (FCP); we use the FCP. 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 and credits 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 credit.
- 1.24. The charges under the EDCM comprise of the following individual components:
  - a) **Fixed charge (pence/MPAN/day)** 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 FCP 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 FCP cost is locational and reflects our assessment of future network reinforcement necessary at the 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 FCP 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 FCP 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 to 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

SP Manweb - Effective from 1 April 2020 - 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	16.30 - 19.30	08.00 - 16.30 19.30 - 22.30	00.00 - 08.00 22.30 - 00.00								
Saturday and Sunday All Year		16.00 - 20.00	00.00 - 16.00 20.00 - 00.00								
Notes	All the above times are	in UK Clock time									

Time Bands for Ha	alf Hourly Unn	netered Prope	rties
	Black Time Band	Yellow Time Band	Green Time Band
Monday to Friday (Including Bank Holidays) June to August Inclusive		08.00 - 22.30	00.00 - 08.00 22.30 - 00.00
Monday to Friday (Including Bank Holidays) November to February Inclusive	16.30 - 19.30	08.00 - 16.30 19.30 - 22.30	00.00 - 08.00 22.30 - 00.00
Monday to Friday (Including Bank Holidays) March, April, May and September, October		08.00 - 22.30	00.00 - 08.00 22.30 - 00.00
Saturday and Sunday All year		16.00 - 20.00	00:00-16:00 20:00-00:00
Notes	All the above times a	re 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	Exceeded capacity charge p/kVA/day	Reactive power charge p/kVArh	Closed LLFCs
Domestic Unrestricted	101, 102	1	3.537			3.11				
Domestic Two Rate	103, 105, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 131, 132, 133, 134, 147, 148, 149, 150	2	3.986	1.737		3.11				145, 146
Domestic Off Peak (related MPAN)	104, 106, 130, 153, 155	2	1.712							135, 136, 137, 138, 140, 141, 142, 143
Small Non Domestic Unrestricted	201, 202, 203, 209	3	3.486			3.98				207
Small Non Domestic Two Rate	205, 211, 231, 232	4	3.542	1.622		3.98				208, 210
Small Non Domestic Off Peak (related MPAN)	212	4	1.657							233, 234, 235, 236, 237
LV Network Domestic	180	0	12.444	2.846	1.624	3.11				
LV Network Non-Domestic Non-CT	280	0	12.146	2.808	1.618	3.98				
LV HH Metered	511, 591	0	10.028	2.449	1.581	15.87	2.32	4.27	0.339	501
LV Sub HH Metered	513, 592	0	7.761	2.032	1.541	5.60	4.81	6.78	0.217	503
HV HH Metered	515, 593	0	6.359	1.825	1.511	84.81	3.74	6.31	0.152	505
NHH UMS category A	900	8	2.776							904, 912, 913
NHH UMS category B	901	1	2.901							905
NHH UMS category C	902	1	3.872							906
NHH UMS category D	903	1	2.703							907
LV UMS (Pseudo HH Metered)	910	0	17.163	2.917	1.841					
LV Generation NHH or Aggregate HH	781, 782, 783, 784, 785	8&0	-1.173			-				
LV Sub Generation NHH	780	8	-1.050			-				
LV Generation Intermittent	786, 787	0	-1.173			-			0.278	
LV Generation Intermittent no RP charge	764	0	-1.173			-				
LV Generation Non-Intermittent	791, 795	0	-7.827	-1.016	-0.148	-			0.278	
LV Generation Non-Intermittent no RP charge	765	0	-7.827	-1.016	-0.148	-				
LV Sub Generation Intermittent	788, 789	0	-1.050			-			0.259	
LV Sub Generation Intermittent no RP charge	766	0	-1.050			-				
LV Sub Generation Non-Intermittent	792, 796	0	-7.103	-0.884	-0.136	-			0.259	
LV Sub Generation Non-Intermittent no RP charge	767	0	-7.103	-0.884	-0.136	-				
HV Generation Intermittent	770, 771	0	-0.694			61.93			0.198	
HV Generation Intermittent no RP charge	768	0	-0.694			61.93				
HV Generation Non-Intermittent	793, 797	0	-5.110	-0.474	-0.100	61.93			0.198	
HV Generation Non-Intermittent no RP charge	769	0	-5.110	-0.474	-0.100	61.93				

## Annex 2 - Schedule of charges for use of the distribution system by Designated EHV Properties (including LDNOs with Designated EHV Properties/end-users)

SP Manweb - Effective from 1 April 2020 - Final EDCM charges

Time Periods for Desig	gnated EHV Properties
Time periods	Super Red Time Band
Monday to Friday (Including Bank Holidays) June to August Inclusive	
Monday to Friday (Including Bank Holidays) November to February Inclusive	16:30 - 19:30
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)
803	803	1300035361194	603	603	1300050649372	Shell Stanlow	-	18625.47	5.52	5.52	-0.292	2394.60	0.05	0.05
804	804	1300035352942				Jaguar & Land Rover	-	8756.58	8.38	8.38	-	-	-	-
805	805	1300035359423				Innospec	0.290	848.76	3.74	3.74	-	-	-	-
806	806	1300051060972	606	606	1300051060981	Bridgewater Paper	-	58.89	2.60	2.60	-0.130	4155.09	0.05	0.05
807	807	1300035359752				General Motors	0.292	14625.03	3.45	3.45	-	-	-	-
808	808	1300035360066				TATA Steel	-	38673.62	5.04	5.04	-	-	-	-
809	809	1300035362480				Urenco	-	-	3.66	3.66	-	-	-	-
810	810	1300051694818	618	618	1300060704603	Ineos Chlor Ltd (Lostock)	-	7637.44	2.04	2.04	-	7637.44	0.05	0.05
811	811	1300060704073	655	655	1300060704082	SafeGuard Bradwell	-	45.47	3.59	3.59	-	3546.49	0.05	0.05
812	812	1300035356130				Knauf Insulation	-	1706.67	6.42	6.42	-	-	-	-
813	813	1300035359585				Air Products	0.349	386.18	3.75	3.75	-	-	-	-
814	814	1300035359619				Shell Chemicals	0.295	1706.67	7.67	7.67	-	-	-	-
815	815	1300035359780				GrowHow	0.296	8757.58	7.79	7.79	-	-	-	-
816	816	1300053536398				Castle Cement	-	959.22	3.76	3.76	-	-	-	-
817	817	1300035361992	648	648	1300060640474	Kronospan	-	3728.14	14.41	14.50	-	390.97	0.05	0.05
819	819	1300035365082	619	619	1300051136210	Albion Inorganic	-	207.85	2.03	2.03	-	-	-	-
820	820	1300060563740	658	658	1300060563759	Tyn dryfol PV	-	8.09	3.16	3.16	-	2426.59	0.05	0.05
821	821	1300035367967	621	621	1300050649336	BHP	-	8280.02	2.85	2.85	-	-	-	-
822	822	1300060251601				Hole House Farm	-	9585.18	5.34	5.34	-	-	-	-
823	823	1300060652610	659	659	1300060652629	Williams Farm Solar Park	-	6.79	3.46	3.46	-	747.25	0.05	0.05
824	824	1300054940674	604	604	1300054940683	Port of Liverpool	-	27.80	2.28	2.28	-	1668.15	0.05	0.05
826	826	1300060579173	661	661	1300060579182	Combermere Abbey PV	-	14.37	4.16	4.16	-	2509.04	0.05	0.05
827	827	1300052785147				Kimberley Clark	-	691.47	10.98	10.98	-	-	-	-
828	828	1300060075390	628	628	1300060075405	Amegni	-	8.00	2.19	2.19	-	623.89	0.05	0.05
829	829	1300035400611	629	629	1300038004507	Salt Union	-	355.70	3.57	3.57	-	-	-	-
830	830	1300060584270	681	681	1300060584280	Parciau Solar Park	-	6.39	3.69	3.69	-	760.36	0.05	0.05
831	831	1300035437700				Ineos Chlor Ltd (Percival Lane)	-	418.41	6.06	6.06	-	-	-	-
833	833	1300035361803	663	663	1300060327224	Toyota	-	1890.53	5.98	5.98	-	954.72	0.05	0.05

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)
834	834	1300051028551				Warmingham Gas Storage	-	3834.41	5.19	5.19	-	-	-	-
835	835	1300050648875	635	635	1300050931602	Arpley Landfill	-	11.92	2.21	2.21	-	-	-	-
836	836	1300035360800				Amcor	-	2021.22	10.61	10.61	-	-	-	-
838	838	1300052122840	638	638	1300052122859	Cemmaes C	-	9.12	2.31	2.31	-	-	-	-
839	839	1300051822667	639	639	1300051821478	PG Strand Gate	1.491	1886.33	2.38	2.38	-	-	-	-
840	840	1300052545267	640	640	1300052545276	Moel Maelogan (A)	-	21.16	2.66	2.66	-	-	-	-
841	841	1300052545285	641	641	1300052545294	Moel Maelogan (B)	-	10.65	2.65	2.65	-	-	-	-
842	842	1300053022082	642	642	1300053022091	North Hoyle	-	520.54	1.26	1.26	-	-	-	-
843	843	1300053466350	643	643	1300053466369	Cefn Croyes (3)	-	2760.41	2.16	2.16	-	-	-	-
844	844	1300053466378	644	644	1300053466387	Cefn Croyes (4)	-	2768.13	2.16	2.16	-	-	-	-
845	845	1300053834682	645	645	1300053834691	Tir Mostyn	-	387.31	2.24	2.24	-	-	-	-
846	846	1300053862801	646	646	1300053862796	Mynydd Clogau	-	10.06	2.84	2.84	-	-	-	-
847	847	1300053962107	647	647	1300053962116	Granox	-	220.26	3.46	3.46	-	-	-	-
848	848	1300060499085	651	651	1300060499094	Tai Moelion	-	4.03	4.49	4.49	-	1207.79	0.05	0.05
849	849	1300054624390	649	649	1300054624405	Braich Ddu	-	23.73	2.38	2.38	-	-	-	-
850	850	1300060668363	652	652	1300060668372	Widnes Biomass	-	717.61	2.42	2.42	-	4485.47	0.05	0.05
851	851	1300054933348	611	611	1300054914140	Moel Maelogan 2	-	6.57	2.53	2.53	-	384.13	0.05	0.05
854	854	1300060138720	654	654	1300060138739	Wem Ddu	-	51.31	2.23	2.23	-	2488.56	0.05	0.05
856	856	1300060102617	656	656	1300060102608	Rhyl Flats	-	167.27	2.33	2.33	-	15389.26	0.05	0.05
857	857	1300060508758				Seaforth Liverpool Dock 2	-	67847.67	14.15	14.15	-	-	-	-
865	865	1300035438944	665	665	1300038004491	Cemmaes B	-	7.92	2.46	2.46	-	-	-	-
866	866	1300037983737	666	666	1300037983746	Penrhyddlan	-	15.18	3.72	3.72		1770.80	0.05	0.05
867	867	1300037983755	667	667	1300037983764	Llidartywaun	-	14.17	3.62	3.62		1771.80	0.05	0.05
868	868	1300035368906	668	668	1300050649381	Rhyd y Groes	-	87.54	2.23	2.23		714.91	0.05	0.05
869	869	1300035370393	669	669	1300050649070	Llangwyrfon	-	27.24	2.75	2.75	-	3351.15	0.05	0.05
870	870	1300060308295				Storenergy (Lostock)	-	1484.92	11.06	11.06		-	-	-
871	871	1300037983996	671	671	1300037984002	Rheidol	-	81.30	1.55	1.55		995.91	0.05	0.05
872	872	1300037983913	672	672	1300037983922	Carno B	-	107.59	2.18	2.18		-	-	-
873	873	1300037983899	673	673	1300037983904	Carno A	-	38.18	2.26	2.26		-	-	-
874	874	1300035438572	674	674	1300050649390	Trysglwyn	-	15.83	2.41	2.41		-	-	-
875	875	1300050649406	675	675	1300050649415	Llanabo	-	7.86	2.44	2.44		-	-	-
876	876	1300060701106	676	676	1300060701115	Ebnal Lodge PV	-	23.34	2.97	2.97		1258.03	0.05	0.05
877	877	1300053593216				Quinn Glass	0.294	3887.23	5.12	5.12	-	-	-	-
878	878	1300054122122				Liverpool Int Bus Park	-	4253.66	4.93	4.93		-	-	-
880	880	1300060621588	670	670	1300060621597	Twemelows Hall PV	-	114.59	5.22	5.22		7792.13	0.05	0.05
881	881	1300060626275	679	679	1300060626284	Teyrdan	-	0.86	3.92	3.92	-	122.79	0.05	0.05
882	882	1300060631656	684	684	1300060631665	Parc Adfer	-	239.67	3.65	3.65	-	2023.91	0.05	0.05
883	883	1300060621950	683	683	1300060621969	Hadley Solar Park	-	1.02	3.74	3.74	-	122.63	0.05	0.05
886	886	1300060657830	686	686	1300060657840	Charity Farm Solar Park	-	0.56	4.15	4.15		123.09	0.05	0.05
887	887	1300035619768	687	687	1300050652905	Mynydd Gorduu	-	101.32	2.50	2.50		-	-	-
888	888	-				Winsford Salt	-	9017.30	7.51	7.51		-	-	-
889	889	1300060626293	678	678	1300060626309	Nefyn	-	0.77	2.89	2.89		122.88	0.05	0.05
890	890	1300060621987	697	697	1300060621996	Frodsham WF 1	0.082	80.91	2.26	2.26	-	4187.18	0.05	0.05
891	891	1300060622002	699	699	1300060622011	Frodsham WF 2	0.181	37.49	2.30	2.30		1931.35	0.05	0.05
892	892	1300060609697	692	692	1300060609702	Ince Biomass	0.290	278.75	2.65	2.65	-0.292	2003.50	0.05	0.05
893	893	1300060659740	693	693	1300060659759	Kinmel Estate Solar Park	-	4.08	2.61	2.61	-	366.88	0.05	0.05
894	894	1300060647600	694	694	1300060647610	Tirgwynt Wind Farm	-	381.72	2.16	2.16	-	19773.17	0.05	0.05
896	896	1300060673442	616	616	1300060673451	Percival Lane STOR	-	31.89	4.39	4.39	-1.056	2550.91	0.05	0.05
897	897	1300060673460	617	617	1300060673489	Stanlow STOR	0.294	63.00	1.80	1.80	-0.292	2519.80	0.05	0.05

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)
898	898	1300051694552	698	698	1300051694827	PG Winnington		607.24	2.13	2.13	-	3564.81	0.05	0.05
899	899	1300060484140				Airbus UK Ltd (33kV)	-	7139.10	6.72	6.72	-	-	-	-
921	921	1300050654248	691	691	1300060208518	Network Rail (Crewe)	-	9193.32	3.91	3.91	-	2298.33	0.05	0.05
922	922	1300050654257	682	682	1300060269895	Network Rail (Speke)	-	3354.85	8.45	8.45	-	1118.28	0.05	0.05
923	923	1300050649994				Network Rail (Bankhall)	-	1457.52	9.42	9.42	-	-	-	-
924	924	1300050653040				Network Rail (Bromborough)	-	932.75	11.87	11.87	-	-	-	-
925	925	1300050654220				Network Rail (Shore Road)	-	5443.56	9.21	9.21	-	-	-	-
MSID 7120	MSID 7120	MSID 7120	MSID 7120	MSID 7120	MSID 7120	Shotton Paper	-	25658.22	1.97	1.97	-	-	-	-
MSID 7203	MSID 7203	MSID 7203	MSID 7203	MSID 7203	MSID 7203	Burbo Bank	-	4446.59	-	-		-	-	-
MSID 0030	MSID 0030	MSID 0030				Risley	-	-	10.57	10.57		-	-	-
MSID 0031/32	MSID 0031/32	MSID 0031/32				Bold	-	-	3.28	3.28		-	-	-
MSID 4532/33	MSID 4532/33	MSID 4532/33	MSID 4532/33	WISID 4522/22	MSID 4532/33	Dolgarrog PS	-	-	4.38	4.38	-0.266	-	0.05	0.05
			MSID 6015		MSID 6015	Maentwrog PS	-	-	-	-		-	0.05	0.05
			MSID 4054	MSID 4054	MSID 4054	Cwm Dyli PS	-	-	-	-		-	0.05	0.05
300	300	1300035348714				Royal London Insurance	2.955	211.59	2.47	2.47	-	-	-	-
302	302	1300035349461				United Biscuits (Uk) Ltd	1.836	211.59	7.40	7.40	-	-	-	-
303	303	1300035350156				Brocklebank Dock	0.648	211.59	12.86	12.86	-	-	-	-
304	304	1300035351949				Bruntwood Limited	-	211.59	6.11	6.11	-	_	_	
305	305	1300035351958				L'pool Daily Post & Echo	_	211.59	5.49	5.49		_	_	_
306	306	1300035352214				University Of Liverpool	1.836	211.59	3.14	3.14	-	-	-	-
307	307	1300035352214				Norwepp Ltd	1.913	211.59	2.70	2.70			_	
308	308	1300035352252				New Capital Dev Ltd	-	211.59	10.40	10.40		-	-	-
309	309	13000353535050				Chiron Vaccines Ltd	0.925	211.59	2.03	2.03		-	-	-
311	311	1300035354346				Bruntwood Ltd (Warrington)	0.925	211.59	3.68	3.68	<u> </u>	-	-	-
314	314	1300035359526				SCA Limited	0.291	211.59	9.50	9.50		-		-
314	315	1300035359567						211.59			-		-	
315	315	1300035359725				UU Water Pic - Sutton Hall	0.294	211.59	9.73 4.07	9.73 4.07	-	-	-	-
316	316	1300035360386				Dairy Crest Ltd		211.59	9.24	9.24	-	-	-	-
						Tetra Pak Manufacturing Uk Ltd	0.088				-	-	-	-
318	318	1300035360952				Hydro Aluminium Deeside Ltd	0.091	211.59	7.82	7.82	-	-	-	-
319	319	1300035362719				British Polythene Industries Plc	0.854	211.59	9.77	9.77	-	-	-	-
320	320	1300035363002				Stanton Land And Marine Ltd	0.983	1144.49	4.59	4.59	-	-	-	-
321	321	1300035364619				Bombardier UK Ltd	0.952	1865.80	5.29	5.29		-	-	-
322	322	1300035364707	700	700	1300060416993	Bentley Motor Cars Ltd	0.946	211.59	6.83	6.83	-0.940	105.79	0.05	0.05
323	323	1300035366379				Tarmac Limited	-	105.79	4.27	4.27	•	-	-	-
324	324	1300035369760				Texplan	0.650	211.59	10.07	10.07	-	-	-	-
325	325	1300051555440				SCA	-	211.59	12.31	12.31	-	-	-	-
326	326	1300052619849				Somerfield Plc	0.834	211.59	5.01	5.01	-	-	-	-
328	328	1300035348662				Alliance & Leicester Plc	2.999	211.59	7.85	7.85	-	-	-	-
329	329	1300035349035				Dairy Crest	1.531	211.59	6.12	6.12	<u> </u>	-	-	-
331	331	1300035349114				Kodak Ltd	1.568	211.59	2.34	2.34	<u> </u>	-	-	-
333	333	1300035349346				Thyssen Krupp (Group)	1.473	211.59	5.72	5.72	<u> </u>	-	-	-
334	334	1300035349355				New Horizon Global Ltd	1.601	211.59	3.65	3.65	-	-	-	-
335	335	1300035349639				Seaforth Commill	1.512	211.59	7.38	7.38	-	-	-	-
337	337	1300035350680				News International Plc	1.521	211.59	3.80	3.80	-	-	-	-
338	338	1300035351248				Essex International Limited	0.165	211.59	5.68	5.68	•	-	-	-
339	339	1300035351735				Elizabeth II Law Courts		211.59	2.96	2.96	•	-	-	-
340	340	1300035351967				Downing Property Services Ltd	-	211.59	5.99	5.99	-	-	-	-
341	341	1300035352739				Canada Dock	-	211.59	5.68	5.68	-	-	-	-
343	343	1300035352970				Liverpool Airport	·	211.59	10.71	10.71	-	-	-	•

Import Unique Identifier	LLFC	Import MPANs/MSIDs	Export Unique Identifier	LLFC	Export MPANs/MSIDs	Name <b>▽</b>	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)
344	344	1300035354179				HP Chemie Pelzer Uk Ltd	-	211.59	7.58	7.58	-	-	-	-
345	345	1300035354986				Novelis Uk Ltd	-	211.59	10.87	10.87	-	-	-	-
346	346	1300035355118				PQ Silicas UK Ltd	-	317.38	7.30	7.30	-	-	-	-
347	347	1300035355136				Baronet Works	-	3116.08	7.79	7.79	-	-	-	-
348	348	1300035355749				Unifrax Ltd	0.827	211.59	11.46	11.46	-	-	-	-
349	349	1300035355837				Delta Metals	0.825	211.59	8.74	8.74	-	-	-	-
350	350	1300035355970				M Baker Recycling Limited	0.877	211.59	15.06	15.06	-	-	-	-
351	351	1300035356194				BOC Limited	0.890	211.59	11.81	11.81	-	-	-	-
352	352	1300035356380				Daresbury Laboratory	1.044	211.59	4.41	4.41	-	-	-	-
353	353	1300035356724				Gypsum	1.076	3943.18	11.51	11.51	-	-	-	-
354	354	1300035356770				Dyson Group Pic		211.59	11.10	11.10		_	-	-
356	356	1300035357009				Rockwood Additives Ltd	-	211.59	4.69	4.69	-	-	-	_
358	358	1300035359600				Greif Uk Ltd	0.277	211.59	6.00	6.00	-	-	-	_
359	359	1300035359673				BP International Limited	0.305	211.59	5.21	5.21	-	-	_	_
360	360	1300035359799				Shell UK Limited	0.299	211.59	5.72	5.72	-	_	_	_
361	361	1300035359901				Owens Corning UK	-	211.59	10.04	10.04	_	_	_	_
362	362	1300035359301				Cadbury Schweppes Plc	0.706	211.59	18.79	18.79	-	-	-	-
363	363	1300035360181				Kelloggs Company Of GB Ltd	0.700	211.59	10.07	10.07	-	-	-	-
364	364	1300035360560				Bryn Lane Properties Llp	0.092	1144.49	3.06	3.06	-	-	-	-
365	365					BICC Wrexham	0.092	211.59	9.44	9.44	-	-	-	-
		1300035360688									-	-	-	-
366	366	1300035361130				M&S Financial Services	2.178	211.59	7.88	7.88		-	-	-
367	367	1300035361812				Element Six Production Ltd	-	211.59	4.37	4.37	-	-	-	-
368	368	1300035361983				Barry Callebaut (Uk) Ltd	2.213	211.59	3.07	3.07	-	-	-	-
369	369	1300035362295				Caparo Steel Products Ltd	0.151	211.59	1.82	1.82		-	-	-
370	370	1300035362700				Thermal Ceramics Ltd	0.298	211.59	2.86	2.86		-	-	-
371	371	1300035362904				Egerton Dock	1.009	19809.09	-	-	-	-	-	-
372	372	1300035362978				Shell UK	1.032	211.59	5.78	5.78	-	-	-	-
373	373	1300035363067				Mobil Sasol	-	211.59	5.45	5.45	-	-	-	-
374	374	1300035363191				Burtons Foods Ltd	-	211.59	9.06	9.06	-	-	-	-
375	375	1300035363225				Unilever UK	0.861	211.59	5.00	5.00		-	-	-
376	376	1300035363252				Champion Properties LLP		211.59	9.40	9.40	·	-	-	-
377	377	1300035363883	719	719	1300060263839	Nestle UK Ltd	1.001	123.90	1.76	1.76	-	87.69	0.05	0.05
378	378	1300035364060	719	719	1300060263839	A&P Falmouth Ltd	1.014	2077.39	8.12	8.12	-	-	-	-
379	379	1300035364177				Barclays Bank Plc	0.944	211.59	13.01	13.01	-	-	-	-
380	380	1300035364256				Harman Technology Limited	0.955	211.59	8.38	8.38	-	-	-	-
381	381	1300035364432				Twyfords Bathrooms	0.925	211.59	4.85	4.85	-	-	-	-
382	382	1300035364646				Morning Foods Limited	0.926	211.59	10.44	10.44	-	-	-	-
383	383	1300035364822				Fisons	0.946	211.59	8.33	8.33	-	-	-	-
384	384	1300035365161				N W F Ltd	0.930	211.59	15.05	15.05	-	-	-	-
385	385	1300035365240				Linpac Wcb	0.955	211.59	8.49	8.49	-	-	-	-
386	386	1300035365287				Britton Group Plc	0.963	211.59	15.48	15.48	-	-	-	-
387	387	1300035366494				Synthite	-	211.59	12.62	12.62	-	-	-	-
388	388	1300035366801				Novar Pic		211.59	11.58	11.58	-	-	-	-
389	389	1300035368232	721	721	1300060267898	Bangor Hospital (Health Sup)	-	135.06	9.15	9.15	-	76.53	0.05	0.05
391	391	1300035368400	.21			Bourne Leisure Limited	-	211.59	7.19	7.19	-	. 0.00	0.50	0.50
392	392	1300035368400				Rehau Ltd		211.59	10.52	10.52	-	-	-	-
393	393	1300035370116				University Of Wales	0.347	211.59	18.11	18.11		-	-	-
394	394	1300035370116				Smiths Group Plc	0.347	211.59	7.41	7.41	-	-	-	-
395	395	1300035616356				Yardley Plastic	1.507	211.59	7.41	7.41	-	-	-	-

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)
397	397	1300050455959				Tulip International Ltd	0.935	211.59	4.89	4.89	-	-	-	-
398	398	1300050482127				Unilever Research	0.867	211.59	4.60	4.60	-	-	-	-
399	399	1300050628390				Seaforth	1.191	38.64	1.40	1.40	-	-	-	-
450	450	1300050632704	717	717	1300050867852	Decoma-Merplas	0.932	211.59	7.56	7.56	-	-	-	-
452	452	1300050955454				Gilbrook Dock	-	11481.59	-	-	-	-	-	-
453	453	1300050977573	720	720	1300060574459	UU Water Plc - Woodside	0.988	1980.01	5.68	5.68	-	97.38	0.05	0.05
454	454	1300050977670	724	724	1300060638642	UU Water Plc - Bromborough	0.874	1477.23	5.04	5.04	-	600.15	0.05	0.05
455	455	1300051438963				S Norton & Co. Ltd	0.795	2077.39	2.95	2.95	-	-	-	-
456	456	1300051517481				MOD - RAF Sealand	-	211.59	4.22	4.22	-	-	-	-
457	457	1300051708346				Healthcare Distribution	1.041	211.59	6.11	6.11	-	-	-	-
458	458	1300052182955				Aluminium Powder Company	-	211.59	9.85	9.85	-	-	-	-
459	459	1300053398578				Chiron Vaccines	0.935	2077.39	4.49	4.49	-	-	-	-
460	460	1300054917684				ESP	-	211.59	4.70	4.70	-	-	-	-
461	461	1300060172544				Neptune (Mann Island)	-	2077.39	15.21	15.21	-	-	-	-
462	462	1300035352260				L.A.H. Teaching Hospital	-	748.18	2.83	2.83		-	-	-
463	463	1300035354123	711	711	1300052227204	UU Water Plc - Sandon Dock	0.656	1152.05	4.09	4.09		-	-	-
464	464	1300035355242	712	712	1300053163518	UU Water Plc Gateworth Sewage	-	168.67	4.87	4.87		42.92	0.05	0.05
465	465	1300035359770	713	713	1300050970114	UU Water Plc - Huntington	2.173	49.53	5.50	5.50		-	-	-
466	466	1300035401331	714	714	1300052226920	UU Water Plc - Shell Green	-	501.48	5.45	5.45		-	-	-
467	467	1300035353148	715	715	1300052368838	Eli Lilly & Co	0.905	1224.29	4.25	4.25		-	-	-
468	468	1300035355794	703	703	1300050867791	Pilkington Glass - Greengate	0.845	706.61	3.57	3.57		-	-	-
469	469	1300035355882	704	704	1300050867807	Pilkington Glass - Cowley Hill	0.875	420.85	2.73	2.73	-	-	-	-
470	470	1300035355190	718	718	1300054580101	Iceland		201.01	10.70	10.70	-	10.58	0.05	0.05
471	471	1300035359813	7.10	7.10	1000001000101	Meadow Foods Ltd	2.140	211.59	7.02	7.02	-	-	-	-
472	472	1300035362746				Wirral Hospital	-	211.59	3.80	3.80	-	-	-	-
473	473	1300035366174				Conway & Denbighshire NHS Trust		211.59	14.12	14.12	-	_	_	_
474	474	1300035438261				Morrisons (Dist Centre)	0.964	211.59	16.48	16.48		_	_	_
475	475	1300060172562				Mersey Travel (Mann Island)	-	105.79	4.33	4.33	-	_	-	-
476	476	1300050712379				Pilkington Glass HO	0.873	211.59	4.90	4.90		_	_	_
477	477	1300050712579				Mod - Raf Valley	-	211.59	8.37	8.37	-	-	-	-
478	478	1300051517747				Mod - Shawbury	0.655	105.79	13.85	13.85		-	_	
479	479	1300031317747				Crewe Station	0.921	211.59	8.03	8.03		-	-	
480	480	1300053303040				Merseyside PTA	0.638	211.59	3.71	3.71	-	-	-	-
481	481	1300031747708				Mackamax Primary	1.057	105.79	3.99	3.99		_	_	
482	482	1300035352906				Whiston Hospital	1.037	211.59	11.02	11.02		_	_	
483	483	1300053532300				Maw Green 2	0.941	3.46	1.39	1.39	-	-	-	-
484	484	1300032398763	702	702	1300050867755	Pilkington Glass - Watson Street	0.889	374.09	2.12	2.12		-	-	-
486	486	1300033333999	702	702	1300030607733	BAE Radway	0.903	2896.23	5.51	5.51		-	-	-
487	487					,	1.805	3942.80	6.56	6.56		-	-	-
487	487	1300035349480 1300060436633				Aintree Fazakerly Hospital Unilever (Chester Gates)	0.289	3942.80 2704.67	5.77	5.77	<u> </u>	-	-	-
488	488	1300060436633				,	0.289	595.87	5.77	5.77			-	-
489 853			050	650	4200000075000	Unilever (Georgia)					- 0.054	- FOEE 74		0.05
	853	1300060075371	653	653	1300060075380	CEW Discoul	-	280.01	4.25	4.25	-0.854	5855.71	0.05	
837	837	1300060736711	662 664	662	1300060736720	Queensferry Diesel	-	19.81	2.27	2.27	-	440.26	0.05	0.05
884	884	1300060707491		664	1300060707507	Beaufort Road	-	11.88	3.49	3.49	-	994.32	0.05	0.05
885	885	1300060729547	615	615	1300060729556	Mersey Warf STOR	-	269.81	4.26	4.26	-0.872	6781.39	0.05	0.05
800	800	1300060790700	622	622	1300060790694	Cefyn Mawr	-	23.05	4.12	4.12	-0.680	2304.60	0.05	0.05
915	915	1300060824829	627	627	1300060824838	Carnegie Battery Storage	-	970.66	2.20	2.20		970.66	0.05	0.05
825	825	1300060784130	660	660	1300060784158	Vauxhall North Rd	0.285	1289.97	3.65	3.65	-0.292	1289.97	0.05	0.05
818	818	1300060748460	680	680	1300060748470	Pilkington's STOR	-	254.86	3.65	3.65	•	6796.33	0.05	0.05

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)
912	912	1300060805560	624	624	1300060805570	Warrington Power- Slutchers lane	-	154.56	3.65	3.65	-	4122.99	0.05	0.05
914	914	1300060818597	626	626	1300060818602	Latchford Lane Gas STOR	-	16.25	3.65	3.65	-	1235.71	0.05	0.05
895	895	1300060785462	696	696	1300060785453	Brenig Wind Farm	-	298.17	2.53	2.53	-	23614.98	0.05	0.05
911	911	1300060805612	623	623	1300060805621	Griffiths Road STOR (Northwich Power)	-	207.10	3.23	3.23	-0.951	5521.91	0.05	0.05
312	312	1300060736891				Alpoco Orthios Eco Park	-	205.13	5.15	5.15	-	-	-	-
336	336	1300060254338				Altcar Rifle Range Estate	3.098	1038.69	3.90	3.90	-	-	-	-
858	858	1300060845962	612	612	1300060845971	Clocaenog Wind farm	-	71.96	2.53	2.53	-	7267.61	0.05	0.05
TBC1	TBC1	-	TBC1A	TBC1A	0	Alexandra Park	-	88.08	4.25	4.25	-0.854	2643.36	0.05	0.05
TBC2	TBC2	-	TBC2A	TBC2A	0	Altcar Training Camp	1.491	1231.37	4.68	4.68	-2.996	1231.37	0.05	0.05
TBC3	TBC3	-	TBC3A	TBC3A	0	Hawthorne Road Battery Storage	-	1807.14	3.01	3.01	-0.634	1807.14	0.05	0.05

PAGE **47** OF **54**SP MANWEB PLC DECEMBER 2018 V0.1

# Annex 3 - Schedule of charges for use of the distribution system by preserved/additional LLF classes

SP Manweb - Effective from 1 April 2020 - Final LV and HV tariffs												
			NHH preserved cha	rges/ additional LLFC	3							
	Closed 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	Exceeded capacity charge p/kVA/day	Reactive power charge p/kVArh			
Domestic Two Rate	145, 146	2	3.986	1.737		3.11						
Domestic Off Peak (related MPAN)	135, 136, 137, 138, 140, 141, 142, 143	2	1.712									
Small Non Domestic Unrestricted	207	3	3.486			3.98						
Small Non Domestic Two Rate	208, 210 4 3.542 1.622 3.98											
Small Non Domestic Off Peak (related MPAN)	233, 234, 235, 236, 237	4	1.657									
LV Medium Non-Domestic	401, 402	5-8	3.651	1.607		18.08						
LV Sub Medium Non-Domestic	403, 404	5-8	3.666	1.609		22.82						
HV Medium Non-Domestic	405	5-8	2.667	1.539		168.42						
	Unit time periods are as specified in the SSC.  SP Distribution uses a default setf for invalid settlement combinations these will be charged at the Domesic Unrestricted Rates.  The Domestic and Non-Domestic Off Peak (related MPAN) tariffs are supplementary to a standard published tariff and therefore only available under these conditions.  Preserved setfits are only available on isseling supplementary in a standard published tariff and therefore only available under these conditions.  3) Supplementary to extramely transfer on existing supplementary to a standard published tariff and therefore only available under these conditions.  3) Supplementary to committy transfer an extramely post of committee or an extramely preserved tariff in another preserved tariff my not normally be restored;  3) It is supply under a preserved tariff abudic cases, other than on change or, the preserved tariff my not normally be restored;  3) Any additional bad required to be supplied on the preserved tariff must be within the existing supply capacity.											

			HH preserved cha	rges/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	Exceeded capacity charge p/kVA/day	Reactive power charge p/kVArh
LV HH Metered	501	0	10.028	2.449	1.581	15.87	2.32	4.27	0.339
LV Sub HH Metered	503	0	7.761	2.032	1.541	5.60	4.81	6.78	0.217
HV HH Metered	505	0	6.359	1.825	1.511	84.81	3.74	6.31	0.152
	<ul> <li>b) If a supply under a preser</li> </ul>	y transfer a r ved tariff sh	meter point from one preserv ould cease, other than on ch	zain conditions: ed tariff to another preserved ange of tenancy, the preserve rust be within the existing sup	d tariff may not normally	/ be restored;			

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

	SP Manweb - Effective from 1 Apr											
Time Bands for Ha	alf Hourly Metered Pr	operties										
Time periods	Red Time Band	Amber Time Band	Green Time Band									
Monday to Friday (Including Bank Holidays) All Year	16.30 - 19.30	08.00 - 16.30 19.30 - 22.30	00.00 - 08.00 22.30 - 00.00									
Saturday and Sunday All Year		16.00 - 20.00	00.00 - 16.00 20.00 - 00.00									
Notes	All the at	All the above times are in UK Clock time										

pril 2020 - Fin	al LDNO tariffs			
	Time Bands for Ha	alf Hourly Unm	netered Prope	rties
		Black Time Band	Yellow Time Band	Green Time Band
	Monday to Friday (Including Bank Holidays) June to August Inclusive		08.00 - 22.30	00.00 - 08.00 22.30 - 00.00
	Monday to Friday (Including Bank Holidays) November to February Inclusive	16.30 - 19.30	08.00 - 16.30 19.30 - 22.30	00.00 - 08.00 22.30 - 00.00
	Monday to Friday (Including Bank Holidays) March to May, & September to October, Inclusive		08.00 - 22.30	00.00 - 08.00 22.30 - 00.00
-	Saturday and Sunday All year		16.00 - 20.00	00:00-16:00 20:00-00:00
	Notes	All the above times a	re 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	Exceeded capacity charge p/kVA/day	Reactive power charge p/kVArh
LDNO LV: Domestic Unrestricted			2.195			1.93			
LDNO LV: Domestic Two Rate			2.474	1.078		1.93			
LDNO LV: Domestic Off Peak (related MPAN)			1.063						
LDNO LV: Small Non Domestic Unrestricted			2.164			2.47			
LDNO LV: Small Non Domestic Two Rate			2.198	1.007		2.47			
LDNO LV: Small Non Domestic Off Peak (related MPAN)			1.028						
LDNO LV: LV Medium Non-Domestic			2.266	0.997		11.22			
LDNO LV: LV Network Domestic			7.723	1.766	1.008	1.93			
LDNO LV: LV Network Non-Domestic Non-CT			7.538	1.743	1.004	2.47			
LDNO LV: LV HH Metered			6.224	1.520	0.981	9.85	1.44	2.65	0.210
LDNO LV: NHH UMS category A			1.723						
LDNO LV: NHH UMS category B			1.800						
LDNO LV: NHH UMS category C			2.403						
LDNO LV: NHH UMS category D			1.678						
LDNO LV: LV UMS (Pseudo HH Metered)			10.652	1.810	1.143				
LDNO LV: LV Generation NHH or Aggregate HH			-1.173			0.00			
LDNO LV: LV Generation Intermittent			-1.173			0.00			0.278
LDNO LV: LV Generation Non-Intermittent			-7.827	-1.016	-0.148	0.00			0.278
LDNO HV: Domestic Unrestricted			1.468			1.29			
LDNO HV: Domestic Two Rate			1.655	0.721		1.29			
LDNO HV: Domestic Off Peak (related MPAN)			0.711						
LDNO HV: Small Non Domestic Unrestricted			1.447			1.65			
LDNO HV: Small Non Domestic Two Rate			1.471	0.673		1.65			
LDNO HV: Small Non Domestic Off Peak (related MPAN)			0.688						
LDNO HV: LV Medium Non-Domestic			1.516	0.667		7.51			
LDNO HV: LV Network Domestic			5.166	1.182	0.674	1.29			
LDNO HV: LV Network Non-Domestic Non-CT			5.043	1.166	0.672	1.65			
LDNO HV: LV HH Metered			4.163	1.017	0.656	6.59	0.96	1.77	0.141
LDNO HV: LV Sub HH Metered			5.203	1.362	1.033	3.75	3.22	4.55	0.145
LDNO HV: HV HH Metered			4.815	1.382	1.144	64.22	2.83	4.78	0.115
LDNO HV: NHH UMS category A			1.153						
LDNO HV: NHH UMS category B			1.204						
LDNO HV: NHH UMS category C			1.608						
LDNO HV: NHH UMS category D			1.122						
LDNO HV: LV UMS (Pseudo HH Metered)			7.126	1.211	0.764				
LDNO HV: LV Generation NHH or Aggregate HH			-1.173			0.00			
LDNO HV: LV Sub Generation NHH			-1.050			0.00			
LDNO HV: LV Generation Intermittent			-1.173			0.00			0.278
LDNO HV: LV Generation Non-Intermittent			-7.827	-1.016	-0.148	0.00			0.278
LDNO HV: LV Sub Generation Intermittent			-1.050			0.00			0.259
LDNO HV: LV Sub Generation Non-Intermittent			-7.103	-0.884	-0.136	0.00			0.259

			Unit charge 1	Unit charge 2					
Tariff name	Unique billing identifier	PCs	(NHH) or red/black	(NHH) or amber/yellow	Green charge(HH) p/kWh	Fixed charge p/MPAN/day	Capacity charge p/kVA/day	Exceeded capacity charge	Reactive power charge
-	٧	~	charge (HH) p/kWh	charge (HH) p/kWh		_		p/kVA/day	p/kVArh
LDNO HV: HV Generation Intermittent			-0.694			0.00			0.198
LDNO HV: HV Generation Non-Intermittent			-5.110	-0.474	-0.100	0.00			0.198
LDNO HVplus: Domestic Unrestricted		1	1.098			0.97			
LDNO HVplus: Domestic Two Rate		2	1.237	0.539		0.97			
LDNO HVplus: Domestic Off Peak (related MPAN)		2	0.531						
LDNO HVplus: Small Non Domestic Unrestricted		3	1.082			1.24			
LDNO HVplus: Small Non Domestic Two Rate		4	1.099	0.503		1.24			
LDNO HVplus: Small Non Domestic Off Peak (related MPAN)		4	0.514						
LDNO HVplus: LV Medium Non-Domestic		5-8	1.133	0.499		5.61			
LDNO HVplus: LV Sub Medium Non-Domestic		5-8	1.781	0.782		11.09			
LDNO HVplus: HV Medium Non-Domestic		5-8	1.450	0.837		91.55			
LDNO HVplus: LV Network Domestic		-	3.862	0.883	0.504	0.97			
LDNO HVplus: LV Network Non-Domestic Non-CT		-	3.769	0.871	0.502	1.24			
LDNO HVplus: LV HH Metered		0	3.112	0.760	0.491	4.92	0.72	1.33	0.105
LDNO HVplus: LV Sub HH Metered		0	3.771	0.987	0.749	2.72	2.34	3.29	0.105
LDNO HVplus: HV HH Metered		0	3.457	0.992	0.821	46.10	2.03	3.43	0.083
LDNO HVplus: NHH UMS category A		8	0.861						
LDNO HVplus: NHH UMS category B		1	0.900						
LDNO HVplus: NHH UMS category C		1	1.202						
LDNO HVplus: NHH UMS category D		1	0.839						
LDNO HVplus: LV UMS (Pseudo HH Metered)		0	5.326	0.905	0.571				
LDNO HVplus: LV Generation NHH or Aggregate HH		8	-0.570			0.00			
LDNO HVplus: LV Sub Generation NHH		8	-0.571			0.00			
LDNO HVplus: LV Generation Intermittent		0	-0.570			0.00			0.135
LDNO HVplus: LV Generation Non-Intermittent		0	-3.804	-0.494	-0.072	0.00			0.135
LDNO HVplus: LV Sub Generation Intermittent		0	-0.571			0.00			0.141
LDNO HVplus: LV Sub Generation Non-Intermittent		0	-3.861	-0.481	-0.074	0.00			0.141
LDNO HVplus: HV Generation Intermittent		0	-0.694	-0.401	-0.014	61.93			0.198
LDNO HVplus: HV Generation Non-Intermittent		0	-5.110	-0.474	-0.100	61.93			0.198
LDNO EHV: Domestic Unrestricted		1	0.783	-0.474	-0.100	0.69			0.130
LDNO EHV: Domestic Two Rate				0.205					
		2	0.883	0.385		0.69			
LDNO EHV: Domestic Off Peak (related MPAN)		2	0.379			0.00			
LDNO EHV: Small Non Domestic Unrestricted		3	0.772			0.88			
LDNO EHV: Small Non Domestic Two Rate		4	0.784	0.359		0.88			
LDNO EHV: Small Non Domestic Off Peak (related MPAN)		4	0.367						
LDNO EHV: LV Medium Non-Domestic		5-8	0.809	0.356		4.00			
LDNO EHV: LV Sub Medium Non-Domestic		5-8	1.271	0.558		7.91			
LDNO EHV: HV Medium Non-Domestic		5-8	1.035	0.597		65.34			
LDNO EHV: LV Network Domestic		-	2.756	0.630	0.360	0.69			
LDNO EHV: LV Network Non-Domestic Non-CT		-	2.690	0.622	0.358	0.88			
LDNO EHV: LV HH Metered		0	2.221	0.542	0.350	3.51	0.51	0.95	0.075
LDNO EHV: LV Sub HH Metered		0	2.692	0.705	0.534	1.94	1.67	2.35	0.075
LDNO EHV: HV HH Metered		0	2.467	0.708	0.586	32.90	1.45	2.45	0.059
LDNO EHV: NHH UMS category A		8	0.615						
LDNO EHV: NHH UMS category B		1	0.642						
LDNO EHV: NHH UMS category C		1	0.858						
LDNO EHV: NHH UMS category D		1	0.599						
LDNO EHV: LV UMS (Pseudo HH Metered)		0	3.801	0.646	0.408				
LDNO EHV: LV Generation NHH or Aggregate HH		8	-0.407			0.00			
LDNO EHV: LV Sub Generation NHH		8	-0.407			0.00			
LDNO EHV: LV Generation Intermittent		0	-0.407			0.00			0.096
LDNO EHV: LV Generation Non-Intermittent		0	-2.715	-0.352	-0.051	0.00			0.096
LDNO EHV: LV Sub Generation Intermittent		0	-0.407			0.00			0.100
LDNO EHV: LV Sub Generation Non-Intermittent		0	-2.756	-0.343	-0.053	0.00			0.100
LDNO EHV: HV Generation Intermittent		0	-0.495			44.20			0.141
LDNO EHV: HV Generation Non-Intermittent		0	-3.647	-0.338	-0.071	44.20			0.141
LDNO 132kV/EHV: Domestic Unrestricted		1	0.584			0.51			
LDNO 132kV/EHV: Domestic Two Rate		2	0.658	0.287		0.51			
LDNO 132kV/EHV: Domestic Off Peak (related MPAN)		2	0.283						
LDNO 132kV/EHV: Small Non Domestic Unrestricted		3	0.575			0.66			
LDNO 132kV/EHV: Small Non Domestic Two Rate		4	0.585	0.268		0.66			

Tariff name	Unique billing identifier	PCs v	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	Exceeded capacity charge p/kVA/day	Reactive power charge p/kVArh
LDNO 132kV/EHV: Small Non Domestic Off Peak (related MPAN)		4	0.274						
LDNO 132kV/EHV: LV Medium Non-Domestic		5-8	0.603	0.265		2.98			
LDNO 132kV/EHV: LV Sub Medium Non-Domestic		5-8	0.948	0.416		5.90			
LDNO 132kV/EHV: HV Medium Non-Domestic		5-8	0.771	0.445		48.70			
LDNO 132kV/EHV: LV Network Domestic		-	2.054	0.470	0.268	0.51			
LDNO 132kV/EHV: LV Network Non-Domestic Non-CT		-	2.005	0.464	0.267	0.66			
LDNO 132kV/EHV: LV HH Metered		0	1.655	0.404	0.261	2.62	0.38	0.70	0.056
LDNO 132kV/EHV: LV Sub HH Metered		0	2.006	0.525	0.398	1.45	1.24	1.75	0.056
LDNO 132kV/EHV: HV HH Metered		0	1.839	0.528	0.437	24.52	1.08	1.82	0.044
LDNO 132kV/EHV: NHH UMS category A		8	0.458						
LDNO 132kV/EHV: NHH UMS category B		1	0.479						
LDNO 132kV/EHV: NHH UMS category C		1	0.639						
LDNO 132kV/EHV: NHH UMS category D		1	0.446						
LDNO 132kV/EHV: LV UMS (Pseudo HH Metered)		0	2.833	0.481	0.304				
LDNO 132kV/EHV: LV Generation NHH or Aggregate HH		8	-0.303			0.00			
LDNO 132kV/EHV: LV Sub Generation NHH		8	-0.304			0.00			
LDNO 132kV/EHV: LV Generation Intermittent		0	-0.303			0.00			0.072
LDNO 132kV/EHV: LV Generation Non-Intermittent		0	-2.023	-0.263	-0.038	0.00			0.072
LDNO 132kV/EHV: LV Sub Generation Intermittent		0	-0.304			0.00			0.075
LDNO 132kV/EHV: LV Sub Generation Non-Intermittent		0	-2.054	-0.256	-0.039	0.00			0.075
LDNO 132kV/EHV: HV Generation Intermittent		0	-0.369			32.94			0.105
LDNO 132kV/EHV: HV Generation Non-Intermittent		0	-2.718	-0.252	-0.053	32.94			0.105
LDNO 132kV: Domestic Unrestricted		1	0.254			0.22			
LDNO 132kV: Domestic Two Rate		2	0.286	0.125		0.22			
LDNO 132kV: Domestic Off Peak (related MPAN)		2	0.123						
LDNO 132kV: Small Non Domestic Unrestricted		3	0.250			0.29			
LDNO 132kV: Small Non Domestic Two Rate		4	0.254	0.117		0.29			
LDNO 132kV: Small Non Domestic Off Peak (related MPAN)		4	0.119						
LDNO 132kV: LV Medium Non-Domestic		5-8	0.262	0.115		1.30			
LDNO 132kV: LV Sub Medium Non-Domestic		5-8	0.412	0.181		2.57			
LDNO 132kV: HV Medium Non-Domestic		5-8	0.336	0.194		21.19			
LDNO 132kV: LV Network Domestic			0.894	0.204	0.117	0.22			
LDNO 132kV: LV Network Non-Domestic Non-CT		-	0.873	0.202	0.116	0.29			
LDNO 132kV: LV HH Metered		0	0.720	0.176	0.114	1.14	0.17	0.31	0.024
LDNO 132kV: LV Sub HH Metered		0	0.873	0.229	0.173	0.63	0.54	0.76	0.024
LDNO 132kV: HV HH Metered		0	0.800	0.230	0.190	10.67	0.47	0.79	0.019
LDNO 132kV: NHH UMS category A		8	0.199						
LDNO 132kV: NHH UMS category B		1	0.208						
LDNO 132kV: NHH UMS category C		1	0.278						
LDNO 132kV: NHH UMS category D		1	0.194						
LDNO 132kV: LV UMS (Pseudo HH Metered)		0	1.233	0.210	0.132				
LDNO 132kV: LV Generation NHH or Aggregate HH		8	-0.132			0.00			
LDNO 132kV: LV Sub Generation NHH		8	-0.132			0.00			
LDNO 132kV: LV Generation Intermittent		0	-0.132			0.00			0.031
LDNO 132kV: LV Generation Non-Intermittent		0	-0.880	-0.114	-0.017	0.00			0.031
LDNO 132kV: LV Sub Generation Intermittent		0	-0.132			0.00			0.033
LDNO 132kV: LV Sub Generation Non-Intermittent		0	-0.894	-0.111	-0.017	0.00			0.033
LDNO 132kV: HV Generation Intermittent		0	-0.161			14.34			0.046
LDNO 132kV: HV Generation Non-Intermittent		0	-1.183	-0.110	-0.023	14.34			0.046
LDNO 0000: Domestic Unrestricted		1	0.000			0.00			
LDNO 0000: Domestic Two Rate		2	0.000	0.000		0.00			
LDNO 0000: Domestic Off Peak (related MPAN)		2	0.000						
LDNO 0000: Small Non Domestic Unrestricted		3	0.000			0.00			
LDNO 0000: Small Non Domestic Two Rate		4	0.000	0.000		0.00			
LDNO 0000: Small Non Domestic Off Peak (related MPAN)		4	0.000						
LDNO 0000: LV Medium Non-Domestic		5-8	0.000	0.000		0.00			
LDNO 0000: LV Sub Medium Non-Domestic		5-8	0.000	0.000		0.00			
	-			•					

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	Exceeded capacity charge p/kVA/day	Reactive power charge p/kVArh
LDNO 0000: HV Medium Non-Domestic		5-8	0.000	0.000		0.00			
LDNO 0000: LV Network Domestic		-	0.000	0.000	0.000	0.00			
LDNO 0000: LV Network Non-Domestic Non-CT		-	0.000	0.000	0.000	0.00			
LDNO 0000: LV HH Metered		0	0.000	0.000	0.000	0.00	0.00	0.00	0.000
LDNO 0000: LV Sub HH Metered		0	0.000	0.000	0.000	0.00	0.00	0.00	0.000
LDNO 0000: HV HH Metered		0	0.000	0.000	0.000	0.00	0.00	0.00	0.000
LDNO 0000: NHH UMS category A		8	0.000						
LDNO 0000: NHH UMS category B		1	0.000						
LDNO 0000: NHH UMS category C		1	0.000						
LDNO 0000: NHH UMS category D		1	0.000						
LDNO 0000: LV UMS (Pseudo HH Metered)		0	0.000	0.000	0.000				
LDNO 0000: LV Generation NHH or Aggregate HH		8	0.000			0.00			
LDNO 0000: LV Sub Generation NHH		8	0.000			0.00			
LDNO 0000: LV Generation Intermittent		0	0.000			0.00			0.000
LDNO 0000: LV Generation Non-Intermittent		0	0.000	0.000	0.000	0.00			0.000
LDNO 0000: LV Sub Generation Intermittent		0	0.000			0.00			0.000
LDNO 0000: LV Sub Generation Non-Intermittent		0	0.000	0.000	0.000	0.00			0.000
LDNO 0000: HV Generation Intermittent		0	0.000			0.00			0.000
LDNO 0000: HV Generation Non-Intermittent		0	0.000	0.000	0.000	0.00			0.000

### Annex 5 - Schedule of line loss factors

This table has intentionally been left blank. 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. This annex will be re-published once these values are available.

SP	Manweb - Illustrat	ive LLFs for year b	peginning 1 April 20	020
Time periods	Period 1	Period 2	Period 3	Period 4
Time periods	(Name 1)	(Name 2)	(Name 3)	(Name 4)
Monday to Friday March to October	23:30 – 07:30	07:30 – 23:30		
Monday to Friday November to February	23:30 – 07:30	20:00 – 23:30	07:30 – 16:00 19:00 – 20:00	16:00 – 19:00
Saturday and Sunday All Year	23:30 – 07:30	07:30 – 23:30		
Notes	All the above times are in Uk	Clock time		

		Generic demand a	nd generation LLFs		
	Me	etered voltage, respective p	periods and associated LLF	Cs	
Metered voltage	Period 1	Period 2	Period 4	Associated LLFC	
Low-voltage network					101,102,103,104,105,106,1 11,112,113,114,115,116,11 1,112,113,114,115,116,11 1,118,112,130,130,131,132, 133,134,135,136,137,138,1 40,141,142,143,145,146,14 7,148,149,150,153,155,180, 201,202,203,205,211,212,2 21,232,233,234,235,236,23 7,280,401,402,501,511,591, 764,765,781,782,783,784,7 85,786,787,791,795,900,90 1,902,903,910
Low-voltage substation					207,208,209,210,403,404,5 03,513,592,780,788,789,79 2,796
High-voltage network					405,505,515,593,768,769,7 70,771,774,775,776,777,77 8,779,793,797
High-voltage substation					300 to 399 Inclusive 445 to 499 Inclusive 700 to 725 Inclusive
33kV generic					
33kV generic					
132kV generic					
132kV generic					

		EHV site sp	ecific LLFs										
	Demand												
Site	Site Period 1 Period 2 Period 3 Period 4 Associated LLFC												
Site 1													
Site 2													
Site 3													
Site 4													
Site 5													

		EHV site sp	ecific LLFs										
	Generation												
Site	Site Period 1 Period 2 Period 3 Period 4 Associated LLFC												
Site 1													
Site 2													
Site 3													
Site 4													
Site 5													

### **Annex 6 - Charges for New or Amended Designated EHV Properties**

Annex 6 - C	harges for N	ew o	r Amended Desi	ignated EHV	Prop	erties									
						SP Manwe	b - Effective from 1 April 2020 - Final ne	w designate	ed EHV char	ges					
Effective from date	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)
	EDCM import 1			EDCM export 1											
	EDCM import 2			EDCM export 2											
	EDCM import 3			EDCM export 3											
	EDCM import 4			EDCM export 4											
	EDCM import 5			EDCM export 5											
	EDCM import 6			EDCM export 6											
	EDCM import 7			EDCM export 7											
	EDCM import 8			EDCM export 8											
	EDCM import 9			EDCM export 9											
	EDCM import 10			EDCM export 10											

						SP I	Manweb - Effective from 1 April 2020 - F	inal new de	signated EH	V line loss fa	actors						
Effective from date	Import Unique Identifier	LLFC	Import MPANs/MSIDs	Export Unique Identifier	LLFC	Export MPANs/MSIDs	Name	Import LLF period 1	Import LLF period 2	Import LLF period 3	Import LLF period 4	Import LLF period 5	Export LLF period 1	Export LLF period 2	Export LLF period 3	Export LLF period 4	Export LLF period 5
	EDCM Import 1			EDCM Export 1													
	EDCM Import 2			EDCM Export 2													
	EDCM Import 3			EDCM Export 3													
	EDCM Import 4			EDCM Export 4													
	EDCM Import 5			EDCM Export 5													
	EDCM Import 6			EDCM Export 6													
	EDCM Import 7			EDCM Export 7													
	EDCM Import 8			EDCM Export 8													
	EDCM Import 9			EDCM Export 9													
	EDCM Import 10			EDCM Export 10													