# Use of System Charging Statement

## Notice of Charges

## Effective from 1st April 2018

## Version 2.1

THIS STATEMENT IS IN A FORM TO BE APPROVED BY THE GAS AND ELECTRICITY MARKETS AUTHORITY (OFGEM)

**ESP Electricity Ltd**
**Bluebird House**
**Mole Business Park**
**Leatherhead**
**Surrey KT22 7BA**

# Version Control

| Version | Date | Description of version and any changes made |
|---|---|---|
| 1.0 | Jan 2017 | Based on template issued December 2016. Includes final charges effective from 1st April 2018 |
| 2.0 | Nov 2018 | Updated Annex 5 with DNO's post audit losses. |
| 2.1 | Feb 2018 | Updated Clause 2.69 reference to processing of D0275s. |

# Contents

## 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[1] for the use of our Distribution System and to provide the schedule of adjustment factors[2] that should be applied in Settlement to account for losses from the Distribution System. We have also included guidance notes in Appendix 2 to help improve your understanding of the charges we apply.

1.2. Within this statement we use terms such as 'Users' and 'Customers' as well as other terms which are identified with initial capitalisation. These terms are defined in the glossary.

1.3. The charges in this statement are calculated using the Common Distribution Charging Methodology (CDCM) for Low Voltage and High Voltage (LV and HV) Designated Properties and the Extra High Voltage (EHV) Distribution Charging Methodology (EDCM) for Designated EHV Properties.

1.4. Separate charges are calculated depending on the characteristics of the connection and whether the use of the Distribution System is for demand or generation purposes. Where a generation connection is seen to support the Distribution System the charges will be negative and the Supplier will receive credits for exported energy.

1.5. The application of charges to 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.

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. The spreadsheets contain supplementary information used for charging purposes and a simple model to assist you to calculate charges. The spreadsheets can be downloaded from http://www.espug.com/library/electricity-charging-statements.aspx

[1] Charges can be positive or negative.
[2] Also known as Loss Adjustment Factors or Line Loss Factors.

**Validity period**

1.8. This charging statement is valid for services provided 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 statement or statements covering the period that is of interest are used.

1.10. Notice of any revision to the statement will be provided to Users of our Distribution System. The latest statements can be downloaded from http://www.espug.com/library/electricity-charging-statements.aspx.

**Contact details**

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

Business Operations Manager
ESP Electricity Ltd
Bluebird House
Mole Business Park
Leatherhead
Surrey KT22 7BA

Tel: 01372 587500
Fax: 01372 587550
Email: mpas@espug.com

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

Business Operations Manager
ESP Electricity Ltd
Bluebird House
Mole Business Park
Leatherhead
Surrey KT22 7BA

Tel: 01372 587500
Fax: 01372 587550
Email: mpas@espug.com

1.13. For all other queries please contact our general enquiries telephone service on 01372 587500, lines are open 08:00 to 18:00 Monday to Friday.

You can also find us on Twitter: @ESPUtilities.

## 2. Charge application and definitions

2.1. The following section details how the charges in this statement are applied and billed to Users of our Distribution System.

2.2. We utilise two billing approaches depending on the type of metering data received. The 'Supercustomer' approach is used for Non-Half Hourly (NHH) metered, NHH unmetered, Half Hourly (HH) metered premises with whole current metering systems and all domestic premises. The 'Site-specific' approach is used for non-domestic Current Transformer (CT) metered premises or pseudo HH unmetered premises.

2.3. Typically, NHH metered or HH metered premises with whole current Metering Systems are domestic and small businesses; Premises with non-domestic CT Metering Systems are generally larger businesses or industrial sites; and unmetered premises are normally streetlights.

**Supercustomer billing and payment**

2.4. Supercustomer billing and payment applies to Meter Point Administration Number (MPAN)s registered as NHH metered, NHH unmetered or aggregated HH metered. The Supercustomer approach makes use of aggregated data obtained from Suppliers using the 'Non Half Hourly Distribution Use of System (DUoS) Report' data flow.

2.5. Invoices are calculated on a periodic basis and sent to each User for whom we transport electricity through our Distribution System. Invoices are reconciled over a period of approximately 14 months to reflect later and more accurate consumption figures.

2.6. The charges are applied on the basis of the LLFC assigned to the MPAN, and the units consumed within the time periods specified in this statement. These time periods may not necessarily be the same as those indicated by the Time Pattern Regimes (TPRs) 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' on page 13 if you believe the allocated LLFC or tariff is incorrect

**Supercustomer charges**

2.7. Supercustomer charges include the following components:

- a fixed charge, pence/MPAN/day; there will only be one fixed charge applied to each MPAN; and
- unit charges, pence/kWh; more than one unit charge may apply depending on the type of tariff for which the MPAN is registered.

2.8. Users who supply electricity to a Customer whose MPAN is registered as Measurement Class A, B, F or G will be allocated the relevant charge structure set out in Annex 1.

2.9. Measurement Class A charges apply to Exit/Entry Points where NHH metering is used for Settlement.

2.10. Measurement Class B charges apply to Exit Points deemed to be suitable as Unmetered Supplies as permitted in the Electricity (Unmetered Supply) Regulations 2001[3] and where operated in accordance with Balancing and Settlement Code (BSC) procedure 520[4].

2.11. Measurement Class F charges apply to Exit/Entry points at domestic premises where HH metering is used for Settlement.

2.12. Measurement Class G charges apply to Exit/Entry points at non-domestic premises with whole current metering systems where HH metering is used for Settlement.

2.13. Identification of the appropriate charge can be made by cross-reference to the LLFC.

2.14. Valid Settlement PC/SSC/Meter Timeswitch Code (MTC) combinations for LLFCs where the Metering System is Measurement Class A and B are detailed in Market Domain Data (MDD).

2.15. 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.

2.16. The time periods for unit charges where the Metering System is Measurement Class A and B are as specified by the SSC. To determine the appropriate

[3] The Electricity (Unmetered Supply) Regulations 2001 available from http://www.legislation.gov.uk/uksi/2001/3263/made
[4] Balancing and Settlement Code Procedures on unmetered supplies are available from https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/

charge rate for each SSC/TPR a lookup table is provided in the spreadsheets that accompanies this statement[5].

2.17. The time periods for unit charges where the Metering System is Measurement Class F and G are set out in the table 'Time Bands for Half Hourly Metered Properties' in Annex 1.

2.18. The 'Domestic Off-Peak' and 'Small Non-Domestic Off-Peak' charges are additional to either an unrestricted or a two-rate charge.

**Site-specific billing and payment**

2.19. Site-specific billing and payment applies to Measurement Class C, D and E Metering Systems. The site-specific billing and payment approach to Use of System (UoS) billing makes use of HH metering data at premises level received through Settlement.

2.20. 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.

2.21. The charges are applied on the basis of the LLFCs assigned to the MPAN (or the Metering System Identifier (MSID) for Central Volume Allocation (CVA) sites), and the units consumed within the time periods specified in this statement.

2.22. 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

**Site-specific billed charges**

2.23. Site-specific billed charges may include the following components:

- a fixed charge, pence/MPAN/day or pence/MSID/day;
- a capacity charge, pence/kVA/day, for Maximum Import Capacity (MIC) and/or Maximum Export Capacity (MEC);
- an excess capacity charge, pence/kVA/day, if a site exceeds its MIC and/or MEC;

[5] [DNO name] - Schedule of charges and other tables – Version[X].xlsx

- unit charges, pence/kWh, more than one unit charge may be applied;

  and

- an excess reactive power charge, pence/kVArh, for each unit in excess of the reactive charge threshold.

2.24. Users who wish to supply electricity to Customers whose Metering System is Measurement Class C, D or E or is settled via CVA will be allocated the relevant charge structure dependent upon the voltage and location of the Metering Point.

2.25. Measurement Class C, E or CVA charges apply to Exit/Entry Points where HH metering data is used for Settlement purposes for non-domestic sites that have CT metering..

2.26. Measurement Class D charges apply to Exit Points deemed to be suitable as Unmetered Supplies as permitted in the Electricity (Unmetered Supply) Regulations 2001[6] and where operated in accordance with BSC procedure 520[7].

2.27. Fixed charges are generally levied on a pence per MPAN/MSID per day basis. Where two or more HH MPANs/MSIDs are located at the same point of connection (as identified in the Connection Agreement), with the same LLFC, and registered to the same Supplier, only one daily fixed charge will be applied.

2.28. LV and HV Designated Properties will be charged in accordance with the CDCM and allocated the relevant charge structure set out in Annex 1.

2.29. LV and HV Designated Properties which utilise a combination of Intermittent or Non-Intermittent generation technologies metered through a single MPAN/MSID will be allocated the Non-Intermittent generation tariff unless the combined installed capacity, as evidenced in ratings contained in the Connection Agreement, for Intermittent generation technologies is higher than the combined installed capacity for Non-Intermittent generation technologies, in which case the Intermittent generation tariff will be allocated.

2.30. Designated EHV Properties will be charged in accordance with the EDCM and allocated the relevant charge structure set out in Annex 2.

[6] The Electricity (Unmetered Supply) Regulations 2001 available from http://www.legislation.gov.uk/uksi/2001/3263/made
[7] Balancing and Settlement Code Procedures on unmetered supplies and available from https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/

2.31. 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.

2.32. 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 for half hourly metered properties**

2.33. The time periods for the application of unit charges to LV and HV Designated Properties that are HH metered are detailed in Annex 1.

2.34. The time periods for the application of unit charges to Designated EHV Properties are detailed in Annex 2.

**Time periods for pseudo half hourly unmetered properties**

2.35. The time periods for the application of unit charges to Unmetered Supply Exit Points that are pseudo HH metered are detailed in Annex 1.

**Application of capacity charges**

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

**Chargeable capacity**

2.37. The chargeable capacity is, for each billing period, the MIC/MEC, as detailed below.

2.38. 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.

2.39. Reductions to the MIC and/or MEC may only be permitted once in a 12 month period. Where the MIC and/or MEC is reduced the new lower level will be agreed with reference to the level of the Customer's maximum demand. The new MIC and/or 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.

2.40. In the absence of an agreement, the chargeable capacity, save for error or omission, will be based on the last MIC and/or MEC previously agreed by the

distributor for the relevant premises' connection. A Customer can seek to agree or vary the MIC and/or MEC by contacting us using the contact details in section 0.

**Exceeded capacity**

2.41. 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**

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

Where:

AI = Active import (kWh)

RI = Reactive import (kVArh)

RE = Reactive export (kVArh)

MIC = Maximum import capacity (kVA)

2.42. Only reactive import and reactive export values occurring at times of active import are used in the calculation. Where data for two or more MPANs is aggregated for billing purposes the HH consumption values are summated prior to the calculation above.

2.43. This calculation is completed for every half hour and the maximum value from the billing period is applied.

**Generation exceeded capacity**

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

Where:

AE = Active export (kWh)

RI = Reactive import (kVArh)

RE = Reactive export (kVArh)

MEC = Maximum export capacity (kVA)

2.44. Only reactive import and reactive export values occurring at times of active export are used in the calculation. Where data for two or more MPANs is aggregated for billing purposes the HH consumption values occurring at times of kWh export are summated prior to the calculation above

2.45. 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**

2.46. 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**

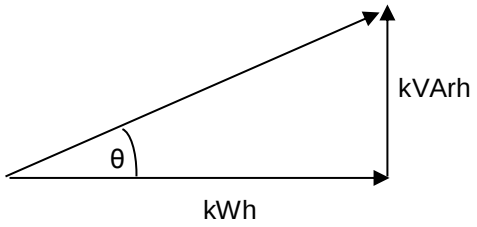
2.47. There is no minimum capacity threshold.

**Application of charges for excess reactive power**

2.48. 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), excess reactive power charges will apply. This threshold is equivalent to an average power factor of 0.95 during the period. Any reactive units in excess of the 33% threshold are charged at the rate appropriate to the particular charge.

2.49. Power Factor is calculated as follows:

Cos θ = Power Factor




2.50. The chargeable reactive power is calculated as follows:

**Demand chargeable reactive power**

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

Where:

AI = Active import (kWh)

RI = Reactive import (kVArh)

RE = Reactive export (kVArh)

2.51. Only reactive import and reactive export values occurring at times of active import are used in the calculation. Where data for two or more MPANs is aggregated for billing purposes the HH consumption values are summated prior to the calculation above.

2.52. The square root calculation will be to two decimal places.

2.53. This calculation is completed for every half hour and the values summated over the billing period.

**Generation chargeable reactive power**

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

Where:

AE = Active export (kWh)

RI = Reactive import (kVArh)

RE = Reactive export (kVArh)

2.54. Only reactive import and reactive export values occurring at times of active export are used in the calculation. Where data for two or more MPANs is aggregated for billing purposes the HH consumption values are summated prior to the calculation above.

2.55. The square root calculation will be to two decimal places.

2.56. This calculation is completed for every half hour and the values summated over the billing period.

**Incorrectly allocated charges / Allocation of charges**

2.57. 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, metering information and, for some tariffs, the metering location. Where

an MPAN/MSID is used for export purposes, the type of generation (intermittent or non-intermittent) also determines the allocation of charges.

2.58. 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.

2.59. 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.

2.60. 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.

2.61. 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.

2.62. 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.

2.63. Where we agree that the current LLFC/charge should be changed, then we will allocate the appropriate set of charges for the connection. Any adjustment will be applied from the date of the request, back to the date of the incorrect allocation or; up to the maximum period specified by [the Limitation Act (1980)

in England and Wales, which covers a six year period 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.

2.64. Any credit or additional charge will be issued to the relevant Supplier(s) who were effective during the period of the change.

2.65. Should we reject the request 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 from the date of request.

**Generation charges for pre-2005 Designated EHV properties**

2.66. ESP Electricity does not have any Designated EHV Properties that were connected to the Distribution System pre-2005.

**Provision of billing data**

2.67. Where HH metering data is required for UoS charging and this is not provided in accordance with the BSC or the Distribution Connection and Use of System Agreement (DCUSA), 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.

2.68. 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.

2.69. 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[8] (as agreed with us). The data shall be emailed to mpas@espug.com. Should ESP Electricity receive unauthorised D0275s instead of the requested D0036s, we will process the D0275 as if it were the same format as a D0036 without any alteration to the time periods.

2.70. 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

[8] MRA Data Transfer Catalogue available from https://dtc.mrasco.com/

to levy a charge on Users who fail to provide such reactive data. In order to estimate missing reactive data, a power factor of 0.9 lag will be applied to the active consumption in any half hour.

**Out of area use of system charges**

2.71. ESP Electricity does not have a Distribution Service Area.

**Licensed distribution network operator charges**

2.72. Licensed Distribution Network Operator (LDNO) charges are applied to LDNOs who operate Embedded Networks on our distribution systems.

2.73. The charge structure for LV and HV Designated Properties embedded in networks operated by LDNOs will mirror the structure of the All-the-way Charge and is dependent upon the voltage of connection of each embedded network to the 'Primary NDNO's[9]' network. The same charge elements will apply as those that match the LDNO's end Customer charges. The relevant charge structures are set out in Annex 4.

2.74. Where a NHH metered MPAN has an invalid Settlement combination, the 'LDNO HV: 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 'LDNO HV: Domestic Unrestricted' fixed and unit charges will be applied for each invalid SSC/TPR combination.

2.75. 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.

2.76. For Nested Networks the relevant charging principles set out in DCUSA Schedule 21[10] will apply.

**Licence exempt distribution networks**

2.77. The Electricity and Gas (Internal Market) Regulations 2011[11] 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.

[9] As defined in DCUSA Schedule 21.
[10] The Distribution and Connection Use of System Agreement (DCUSA) available from http://www.dcusa.co.uk/SitePages/Documents/DCUSA-Document.aspx
[11] The Electricity and Gas (Internal Market) Regulations 2011 available from http://www.legislation.gov.uk/uksi/2011/2704/contents/made

2.78. 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.

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

**Full settlement metering**

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

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

**Difference metering**

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

**Gross settlement**

2.83. Where one of our MPANs 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.

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

- be provided in a text file in the format of the D0036 MRA data flow;

- the text file shall be emailed to mpas@espug.com;
- 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”.

2.85. 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.

**Net settlement**

2.86. Where one of our MPANs is embedded within a licence exempt distribution network connected to one of our Distribution Systems, and difference metering is in place for Settlement purposes, and we do **not** receive gross measurement data for the boundary MPAN, we will charge the boundary MPAN Supplier based on the net measurement for use of our Distribution System. Charges will also be levied directly to the Supplier of the embedded MPAN(s) connected within the licence exempt distribution network based on the actual data received.

2.87. The charges applicable for the embedded MPANs are unit charges only. These will be the same values as those at the voltage of connection to the licence exempt distribution network. The fixed charge and capacity charge, at the agreed MIC/MEC of the boundary MPAN, will be charged to the boundary MPAN Supplier.

## 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 the annexes to this document.

3.2. These charges are also listed in spreadsheets which are published with this statement and can be downloaded from:
http://www.espug.com/library/electricity-charging-statements.aspx

3.3. Annex 1 contains 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 within their embedded Distribution System.

3.5. Annex 3 contains details of any preserved and additional charges that are valid at this time. Preserved charges are mapped to an appropriate charge and are closed to new Customers.

3.6. Annex 4 contains the charges applied to LDNOs in respect of LV and HV Designated Properties connected in their embedded Distribution System.

## 4. Schedule of line loss factors

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

4.1. Electricity entering or exiting our Distribution System is adjusted to take account of energy that is lost[12] 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[13] (LLFs) and providing these to Elexon. Elexon is the company that manages the BSC. This code covers the governance and rules for the balancing and settlement arrangements.

4.3. LLFs are used to adjust the Metering System volumes to take account of losses on the Distribution System.

### Calculation of line loss factors

4.4. LLFs are calculated in accordance with BSC procedure 128. BSCP128 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

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

[13] Also referred to as Loss Adjustment Factors.

connected at LV or HV and the site-specific method is used for sites connected at EHV or where a request for site-specific LLFs has been agreed. Generic LLFs will be applied as a default to all new EHV sites until sufficient data is available for a site-specific calculation.

4.6. The definition of EHV used for LLF purposes differs from the definition used for defining Designated EHV Properties in the EDCM. The definition used for LLF purposes can be found in our LLF methodology.

4.7. The Elexon website http://www.elexon.co.uk/reference/technical-operations/losses/ contains more information on LLFs. This page also has links to BSCP128 and to our LLF methodology.

**Publication of line loss factors**

4.8. The LLFs used in Settlement are published on the Elexon portal website, www.elexonportal.co.uk. The website contains the LLFs in standard industry data formats and in a summary form. A user guide with details on registering and using the portal is also available.

4.9. The BSCP128 sets out the timetable by which LLFs are submitted and audited. The submission and audit occurs between September and December in the year prior to the LLFs becoming effective. Only after the completion of the audit at the end of December and BSC approval are the final LLFs published.

4.10. Illustrative LLFs based on the latest submitted LLFs are provided in Annex 5 of this statement. These illustrative LLFs are provided with reference to the metered voltage or associated LLFC for generic LLFs and by reference to the LLFCs for site-specific LLFs. Each LLF is applicable to a defined time period.

4.11. As this charging statement is published a complete year before the LLFs have been published it is important to note that the LLFs provided in this statement are for illustration only and may be revised during the BSCP128 process.

4.12. When using the tables in Annex 5, reference should be made to the LLFC allocated to the MPAN to find the appropriate values.

## 5. Notes for Designated EHV Properties

**EDCM costs**

5.1. ESP Electirity does not currently have any designated EHV properties.

5.2. 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 addendum will also be sent to all relevant DCUSA parties (i.e. the registered Supplier) and where requested the Customer.

5.6. The new Designated EHV Properties' charges will be added to Annex 2 in the next full statement released.

**Charges for amended Designated EHV Properties**

5.7. Where an existing Designated EHV Property is modified and energised in the charging year, we may revise 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**

5.8. ESP Electricity does not offer 'demand side management'.

## 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 www.elexon.co.uk/ELEXON Documents/trading_arrangements.pdf. |
| Common Distribution Charging Methodology (CDCM) | The CDCM used for calculating charges to Designated Properties as required by standard licence condition 13A of the electricity distribution licence. |
| 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. |
| Customer | 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;<br><br>Or<br><br>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. |
| Designated Properties | As defined in standard condition 13A of the electricity distribution licence. |

<table>
<tr><th>Term</th><th>Definition</th></tr>
<tr><td>Distributor IDs</td><td>These are unique IDs that can be used, with reference to the MPAN, to identify your LDNO. The charges for other network operators can be found on their website.
<table>
<tr><th>ID</th><th>Distribution Service Area</th><th>Company</th></tr>
<tr><td>10</td><td>East of England</td><td>UK Power Networks</td></tr>
<tr><td>11</td><td>East Midlands</td><td>Western Power Distribution</td></tr>
<tr><td>12</td><td>London</td><td>UK Power Networks</td></tr>
<tr><td>13</td><td>Merseyside and North Wales</td><td>Scottish Power</td></tr>
<tr><td>14</td><td>Midlands</td><td>Western Power Distribution</td></tr>
<tr><td>15</td><td>Northern</td><td>Northern Powergrid</td></tr>
<tr><td>16</td><td>North Western</td><td>Electricity North West</td></tr>
<tr><td>17</td><td>Scottish Hydro Electric (and embedded networks in other areas)</td><td>Scottish Hydro Electric Power Distribution plc</td></tr>
<tr><td>18</td><td>South Scotland</td><td>Scottish Power</td></tr>
<tr><td>19</td><td>South East England</td><td>UK Power Networks</td></tr>
<tr><td>20</td><td>Southern Electric (and embedded networks in other areas)</td><td>Southern Electric Power Distribution plc</td></tr>
<tr><td>21</td><td>South Wales</td><td>Western Power Distribution</td></tr>
<tr><td>22</td><td>South Western</td><td>Western Power Distribution</td></tr>
<tr><td>23</td><td>Yorkshire</td><td>Northern Powergrid</td></tr>
<tr><td>24</td><td>All</td><td>Independent Power Networks</td></tr>
<tr><td>25</td><td>All</td><td>ESP Electricity Ltd</td></tr>
<tr><td>26</td><td>All</td><td>Energetics Electricity Ltd</td></tr>
<tr><td>27</td><td>All</td><td>The Electricity Network Company Ltd</td></tr>
<tr><td>29</td><td>All</td><td>Harlaxton Energy Networks</td></tr>
<tr><td>30</td><td>All</td><td>Peel Electricity Networks Ltd</td></tr>
<tr><td>31</td><td>All</td><td>UK Power Distribution Ltd</td></tr>
</table></td></tr>
<tr><td>Distribution Connection and Use of System Agreement (DCUSA)</td><td>The DCUSA is a multi-party contract between the licensed electricity distributors, suppliers, generators and Offshore Transmission Owners of Great Britain.<br>It is a requirement that all licensed electricity distributors and suppliers become parties to the DCUSA.</td></tr>
</table>

| 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. |
| Distribution System | 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:<br>• Grid Supply Points or generation sets or other entry points<br>to the points of delivery to:<br>• 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)<br>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 LDNO | This refers to an LDNO operating a Distribution System which is embedded within another Distribution System. |
| 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 can not be made available on demand, in accordance to the definitions in Engineering Recommendation P2/6. These include wind, tidal, wave, photovoltaic and small hydro. |
| Invalid Settlement Combination | A Settlement combination that is not recognised as a valid combination in market domain data - see https://www.elexonportal.co.uk/MDDVIEWER. |
| kVA | Kilovolt 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 in respect of electricity distribution activities in Great Britain. |
| Line Loss Factor (LLF) | The factor that is used in Settlement to adjust the metering system volumes to take account of losses on the distribution system. |
| Line Loss Factor Class (LLFC) | An identifier assigned to an SVA metering system which is used to assign the LLF and use of system charges. |
| Load Factor | $= \frac{annual\ consumption\ (kWh)}{maximum\ demand\ (kW) \times hours\ in\ year}$ |
| 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 | A classification of metering systems used in the BSC which indicates how consumption is measured, i.e.:<br>• Measurement class A – non-half hourly metering equipment;<br>• Measurement class B – non-half hourly unmetered supplies;<br>• Measurement class C – half hourly metering equipment at or above 100kW premises;<br>• Measurement class D – half hourly unmetered supplies;<br>• Measurement class E – half hourly metering equipment below 100kW premises with CT;<br>• Measurement class F – half hourly metering equipment at below 100kW premises with CT or whole current, and at domestic premises; and<br>• Measurement class G – half hourly metering equipment at below 100kW premises with whole current and not at domestic premises. |
| 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 MRA is an Agreement that sets out terms for the provision of Metering Point Administration Services (MPAS) Registrations, and procedures in relation to the Change of Supplier to any premises/metering point. |
| 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 to the definitions in Engineering Recommendation P2/6. The generator can choose when to operate, and bring more benefits to the network if it runs at times of high load. These include combined cycle gas turbine (CCGT), gas generators, landfill, sewage, biomass, biogas, energy crop, waste incineration and combined heat and power (CHP). |
| 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. |

| Term | Definition |
|---|---|
| Supplier Volume Allocation (SVA) | As defined in the BSC. |
| Time Pattern Regime (TPR) | The pattern of switching behaviour through time that one or more meter registers follow. |
| Unmetered Supplies | Exit points deemed to be suitable as unmetered supplies as permitted in the Electricity (Unmetered Supply) Regulations 2001 and where operated in accordance with BSC procedure 520[14]. |
| 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. |

[14] Balancing and Settlement Code Procedures are available from http://www.elexon.co.uk/pages/bscps.aspx

## Appendix 2 - Guidance notes[15]

### 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 underground cables, as well as substations and transformers.

1.2. In most cases, your Supplier is invoiced for the distribution charge and this is normally part of your total bill. In some cases, for example business users, the Supplier may pass through the distribution charge as an identifiable line item on the electricity bill.

1.3. Where electricity is generated at a property your Supplier may receive a credit for energy that is exported on to the Distribution System. These credits are intended to reflect that the exported generation may reduce the need for traditional demand led reinforcement of the Distribution System.

1.4. Understanding your distribution charges could help you reduce your costs and increase your credits. This is achieved by understanding the components of the charge to help you identify whether there may be opportunities to change the way you use the Distribution System.

### Meter point administration

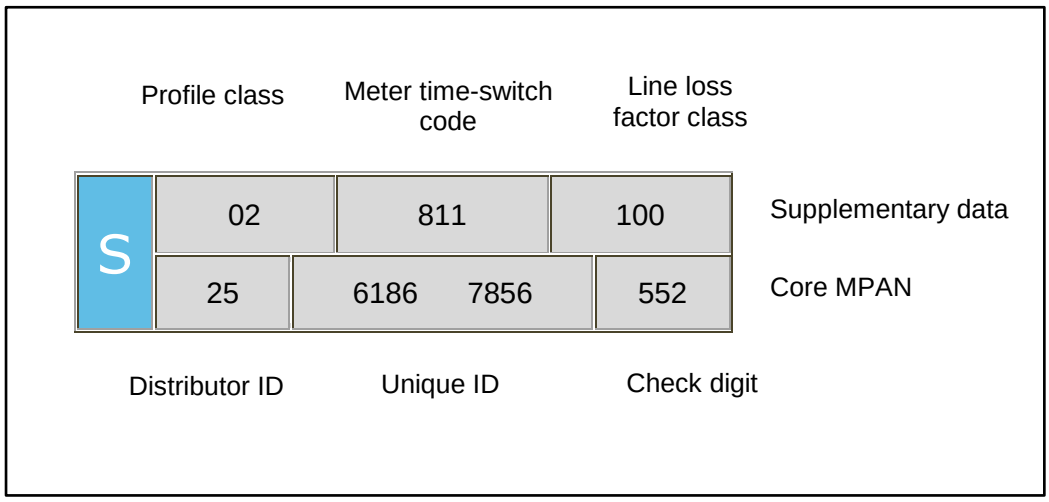
1.5. We are responsible for managing the electricity supply points that are connected to our Distribution System. Typically, every supply point is identified by a Meter Point Administration Number (MPAN). A few supply points may have more than one MPAN depending on the metering configuration (e.g. a school which may have an MPAN for the main supply and an MPAN for catering).

1.6. The full MPAN is a 21 digit number, preceded by an 'S'. 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.

[15] 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 line loss factor class 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 core MPAN. The Distributor ID for ESP Electricity is 25. Other Distributor IDs can be referenced in the glossary.

1.9. Additionally it can be useful to understand the profile class provided in the supplementary data. The profile class will be a number between 00 and 08. The following list provides details of the allocation of profile classes to types of customers:

- '01' – Domestic customers with unrestricted supply
- '02' – Domestic customers with restricted load, for example off-peak heating
- '03' – Non-domestic customers with unrestricted supply
- '04' – Non-domestic customers with restricted load, for example off-peak heating
- '05' – Non-domestic maximum demand customers with a Load Factor of less than 20%
- '06' – Non-domestic maximum demand customers with a Load Factor between 20% and 30%
- '07' – Non-domestic maximum demand customers with a Load Factor between 30% and 40%
- '08' – Non-domestic maximum demand customers with a Load Factor over 40% or non-half hourly metered generation customers

- ‘00’ – Half-hourly metered demand and generation customers

1.10. Unmetered Supplies will be allocated to profile class 01, 08 and 00 depending on the type of load or the measurement method of the load.

1.11. The allocation of the profile class will affect your charges. If you feel that you have been allocated the wrong profile class, please contact your Supplier as they are responsible for this.

**Your charges**

1.12. All distribution charges that relate to our Distributor ID 25 are provided in this statement.

1.13. You can identify your charges by referencing your line loss factor class, from Annex 1. If the MPAN is for a Designated EHV Property, then the charges will be found in Annex 2. In a few instances, the charges may be contained in Annex 3. When identifying charges in Annex 2, please note that some line loss factor classes have more than one charge. In this instance you will need to select the correct charge by cross referencing with the core MPAN provided in the table.

1.14. Once you have identified which charge structure applies to your MPAN then you will be able to calculate an estimate of your distribution charge using the calculator provided in the spreadsheet ‘Schedule of charges and other tables’ found in the sheet called ‘Charge Calculator’. This spreadsheet can be downloaded from http://www.espug.com/library/electricity-charging-statements.aspx.

**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, 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 two approved approaches: Long Run Incremental Cost (LRIC) and Forward Cost Pricing (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** - 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/LRIC component, the National Grid Electricity Transmission cost and other regulated costs.

Capacity charges are levied on the MIC, MEC, and any exceeded capacity. You may wish to review your MIC or MEC periodically to ensure it remains appropriate for your needs as you may be paying for more capacity than you require. If you wish to make changes contact us via the details in paragraph **Error! Reference ource not found.**

The FCP/LRIC 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/LRIC cost is included in the capacity charge.

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

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

## Schedules of Charges

The Annexes that are referred to in this statement are available in spreadsheet form. The following spreadsheets can be downloaded from http://www.espug.com/library/electricity-charging-statements.aspx.

- Annex 1 - Schedule of charges for use of the distribution system by LV and HV Designated Properties
- Annex 2 - Schedule of charges for use of the distribution system by Designated EHV Properties (including LDNOs with Designated EHV Properties/end-users)
- Annex 3 - Schedule of charges for use of the distribution system by preserved/additional LLF classes
- Annex 4 - Charges applied to LDNOs with LV and HV end-users
- Annex 5 - Schedule of line loss factors
- Annex 6 - Addendum to charging statement detailing charges for new Designated EHV Properties