

# **UK Power Networks' Use of System Charging Methodology**

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## General Introduction

### Who we are

1. UK Power Networks (Operations) Ltd ("UK Power Networks") is responsible for the three licensed Electricity Distribution businesses serving the whole of London, the East and the South East of England. Our Electricity Distribution Licences ("Licences") are issued under the Electricity Act 1989 as amended by the Utilities Act (2000), the Sustainable Energy Act (2003) and the Energy Act 2004 ("the Act").
2. This statement is produced by UK Power Networks, although certain responsibilities may be undertaken by associated companies or agents. Reference to UK Power Networks throughout this document is with regard to each of the three licensed businesses, namely Eastern Power Networks plc, London Power Networks plc and South Eastern Power Networks plc.

### Licence Obligations

3. This statement describes the Use of System Charging Methodologies under which authorised persons will be charged for use of UK Power Networks' Electricity Distribution System.
4. Notwithstanding our obligation to set Use of System charges in line with the special conditions of our Licences (as amended from time to time), UK Power Networks is obliged, under Licence Condition 13, paragraph 13.1(a), of its Licences, to have in force a Use of System Charging Methodology approved by the Gas and Electricity Markets Authority ("the Authority"). We are also obliged to review our Use of System Charging Methodology statement annually.
5. Words and expressions used in this statement have (unless specifically defined herein) the definitions given to them in the Act or the Licences and shall be construed accordingly. Charges are current at the time of publication and will not be changed, except as provided for in the relevant agreement for Use of System (see below) and subject to Condition 14 of the Licences.
6. Additional copies of this statement can be obtained from our web-site at [www.ukpowernetworks.co.uk](http://www.ukpowernetworks.co.uk), or alternatively they are available on request, via the contact details on page 5.

### Price Control

7. UK Power Networks' licensed companies are regulated by the Authority. The control developed by the regulator on behalf of the Authority sets the targets and allowed revenues for network companies. The characteristics and mechanisms of this price control are developed by the regulator in the price control review period depending on network company performance over the last control period and predicted expenditure in the next.

### Use of System

8. UK Power Networks will levy Use of System charges for utilisation of its network for the supply of electricity to exit points and/or the transportation of electricity across its network from entry points and are published in our Use of System Charging Statements issued under Licence Condition 14, which may vary year on year in order to recover the allowed revenue. Copies of these Charging Statements can be obtained from our website at [www.ukpowernetworks.co.uk](http://www.ukpowernetworks.co.uk), or alternatively they are available on request, via the contact details on page 5.

### Connection and Use of System Boundary

9. UK Power Networks splits the recovery of costs between those associated with connection to the Distribution System and those associated with the on-going use of the Distribution System for both demand and generation Customers. This statement details the charging methodologies that are applied for the calculation of on-going Use of System charges as published in the Use of System Charging Statements.

10. Also issued under Licence Condition 13, the Statement of Methodology and Charges for Connection to the Electricity Distribution Systems of Eastern Power Networks plc, London Power Networks plc and South Eastern Power Networks plc, details the Connection Charging Methodology that is used as the basis for calculation of connection charges. That statement also contains indicative charges and examples to aid understanding of Connection charges, and is referred to herein as 'Methodology and Charges for Connection'
11. The 'Methodology and Charges for Connection' Statement can be obtained from our website at [www.ukpowernetworks.co.uk](http://www.ukpowernetworks.co.uk), or alternatively it is available on request via the contact details on page 5.
12. Persons seeking use of the system with respect to a new supply must apply for connection in accordance with the processes set out in our 'Methodology and Charges for Connection' Statement.
13. Where a person requires a connection to UK Power Networks' electricity distribution system pursuant to Section 16 of the Act, the provisions of this statement are without prejudice to the provisions of sections 16 to 21 & 23 of the Act (those sections which deal with the rights, powers and duties of UK Power Networks, as an electricity distributor) in respect of the distribution of electricity to owners or occupiers of premises.

#### **The Contractual Framework**

14. Persons entitled to use UK Power Networks' Distribution System are those who are authorised by Licence or by exemption under the Act to supply, distribute or generate electricity ("Authorised Electricity Operators"). In order to protect all users of the system, UK Power Networks will require evidence of authorisation before agreeing terms for use of the system.
15. NOTE: In the rest of this commentary, requirements applying to authorised users or Authorised Electricity Operators should be taken to mean Licensed Suppliers, Licensed Electricity Distributors or Licensed Generators only.
16. Persons seeking to use the system will be required, prior to using the system, to enter into an agreement with UK Power Networks setting out the obligations of both parties. The party seeking use of the system will be required to:
  - pay all charges due in respect of use of the system as described in this statement and the accompanying schedules;
  - be a party (where the user is a Licensed Supplier or a Licensed Distributor) to the Master Registration Agreement (MRA) for the provision of Metering Point Administration Services (MPAS) within UK Power Networks' authorised areas;
  - enter into the National Grid Electricity Transmission (NGET) Connection and Use of System Code and any necessary Bilateral Agreement, governing connections to and use of NGET's transmission system, unless UK Power Networks is informed by NGET that this is not required in any particular case;
  - be a party to the Balancing and Settlements Code (BSC); and
  - comply with the provisions of the Distribution Code.
17. If the applicant and UK Power Networks fail to agree contractual terms, or any variation of contractual terms proposed by UK Power Networks, either party may request settlement by Ofgem.
18. While the terms and conditions in the agreements will be consistent with those in this statement, the agreement will take precedence. Where an Authorised Electricity Operator, having entered into an agreement for use of UK Power Networks' electricity distribution system, ceases for whatever reason to be an Authorised Electricity Operator with respect to that use of the system, then the entitlement to use

of the system will cease forthwith, but the operator will continue to be liable under the agreement unless and until the agreement is terminated. In order to avoid any liability in this regard, an Authorised Electricity Operator wishing to terminate his agreement or wishing to notify a change should give UK Power Networks no less than 28 days' notice. UK Power Networks will normally respond within 28 days of a notification of change.

### Contact Details

19. This statement has been prepared in order to discharge UK Power Networks' obligation under the Licences. If you have any questions about the contents of this statement please contact us at the address shown below. Also provided below are contact details for Ofgem, should prospective users wish to enquire separately on matters relating to this statement.

UK Power Networks

Income Pricing,  
UK Power Networks, Energy House,  
Hazelwick Avenue, Crawley,  
West Sussex, RH10 1EX.

0845 601 4516

[distributionpricing@ukpowernetworks.co.uk](mailto:distributionpricing@ukpowernetworks.co.uk)  
[www.ukpowernetworks.co.uk](http://www.ukpowernetworks.co.uk)

Office of the Gas and Electricity Markets

10 South Colonnade  
Canary Wharf  
London  
E14 4PU

020 7901 7000

[www.ofgem.gov.uk](http://www.ofgem.gov.uk)



## Common Distribution Charging Methodology

### Common Distribution Charging Methodology (CDCM) for the calculation of charges in respect of (LV & HV) Designated Properties

20. UK Power Networks is obliged under Licence Condition 13A to ensure that the CDCM is complied with when setting charges for Designated Properties.
21. The CDCM statement is a separate statement which describes the methodology under which the charges will be calculated to LV & HV Designated Properties. The CDCM is applicable to all sites connected at Low Voltage and the majority of sites connected at High Voltage.
22. The CDCM statement is embedded into and governed by the Distribution Connection and Use of System Agreement (DCUSA). The CDCM forms Schedule 16; this schedule and the full DCUSA document are available on the DCUSA website at [www.dcusa.co.uk](http://www.dcusa.co.uk).
23. The CDCM models prepared by UK Power Networks for the calculation of charges are available from our website at [www.ukpowernetworks.co.uk](http://www.ukpowernetworks.co.uk), or alternatively they are available on request via the contact details on page 5.

## EHV Distribution Charging Methodology

### EHV Distribution Charging Methodology (EDCM) for the calculation of charges in respect of Designated EHV Properties

24. UK Power Networks is obliged under Licence Condition 13B to ensure that the EDCM is complied with when setting charges for Designated EHV Properties.
25. The EDCM statement is a separate statement which describes the methodology under which the charges will be calculated for Designated EHV Properties. The EDCM is applicable to most sites connected at High Voltage substations and all sites connected at EHV.
26. The EDCM statement is embedded into and governed by the Distribution Connection and Use of System Agreement (DCUSA). There are two versions of the EDCM and UK Power Networks uses the LRIC version of the EDCM that is detailed in schedule 18. This schedule and the full DCUSA document is available on the DCUSA website at <http://www.dcusa.co.uk>. The methodology also applies to Users who are not party to DCUSA.

### Prospective EDCM Charges

27. Developers of schemes likely to be Designated EHV Properties and have charges which are calculated using the EDCM are encouraged to contact us for indicative prices. Please use the contact details provided on page 5.

## Distribution Charging Methodologies Development

28. UK Power Networks along with the other Distribution Network Operators participate in the DCUSA meeting known as the 'Distribution Charging Methodology Development Group' (DCMDG) as defined in DCUSA Schedule 28. This meeting is used to initiate and discuss development of the charging methodologies and is open to any interested party.
29. This forum is also an opportunity for parties to raise and discuss any issues that they have with the charging methodologies. If you would like to be on the distribution list for the meeting papers along with other information for the DCMDG, please send your details to [dcmdg@electralink.co.uk](mailto:dcmdg@electralink.co.uk).

## Distributed Generation Network Unavailability

30. UK Power Networks makes compensation payments to Customers for network outages under two schemes.
31. The majority of Customers are compensated under the Guaranteed Standards<sup>1</sup> arrangements. Customers who are off supply for greater than defined periods of time are entitled to a payment. This scheme applies to all demand Customers and to all generators not included in the scheme described below.
32. For Customers with generators connected at more than 1,000 volts, the following scheme will apply. This scheme is known as Distributed Generation Network Unavailability (DGNU) and payments will be calculated for each generator on the following basis:

$$Payment = A \times B \times (C - D)$$

Where:

A = the network unavailability price of £2 per MW per hour, or some other value agreed between the Customer and UK Power Networks and recorded within the connection agreement.

B= incentivised generator capacity; the highest active electrical power that can be generated (or the relevant incremental change of this amount in cases of the expansion of existing generation plant) by the generator for the year, according to the Connection Agreement and/or Use of System Agreement(s).

C = network interruption duration; the total duration of all occurrences (in minutes) on the distribution system each of which involves a physical break in the circuit between itself and the rest of the system or due to any other open circuit condition, which prevents the generator from exporting power. It excludes:

- 50 per cent of the total duration of cases where UK Power Networks takes pre-arranged outages of its equipment for which the statutory notification has been issued to the generator;
- the cases where the generator has specific exemption agreements with UK Power Networks in the Connection Agreement and/or Use of System Agreement(s); and
- the cases which are part of exempted events in the quality of service incentive or the Guaranteed Standard Statutory Instrument (such exemptions include interruptions of less than three minutes duration and industrial action).

D = the baseline network interruption duration for the relevant year which either has a default value of zero or some other value agreed between the Customer and UK Power Networks and recorded within the Connection Agreement and/or Use of System Agreement(s).

33. DGNU scheme payments will be calculated by UK Power Networks on an annual basis (1st April - 31st March) and payments made shortly after the end of each year. Payments may also be made on an interim basis during the year on each occasion that the payment due to a generator exceeds £250. This payment is automatic and does not need to be claimed by the generation Customer.

<sup>1</sup> Statutory Instrument 2005 No. 1019 The Electricity (Standards of Performance) Regulations 2005 as amended or replaced from time to time.

## Reconciliation of modelled revenue to allowed revenue

34. UK Power Networks receives regulated allowed revenue through the distribution price control. This allowed revenue is recovered through a single revenue 'pot' across both demand and generation users as well as between the CDCM model and the EDCM model.
35. The EDCM methodology calculates the charges of each Designated EHV Property on an individual basis. These charges, and consequently the revenues recovered, are based on the network utilised by each Customer. The revenues are summated and reported as revenue from Designated EHV Properties.
36. The CDCM model requires, as an input, a forecast of any revenues that are calculated outside of that methodology. The revenue raised from Designated EHV Properties is entered into the CDCM model as that input. The final matching of target revenue to allowed revenue is completed using the method described in the CDCM.

## Use of System Charges

### Where our Use of System Charges are published

37. UK Power Networks' Use of System charges are published in our Use of System Charging Statements. These can be obtained from our website at [www.ukpowernetworks.co.uk](http://www.ukpowernetworks.co.uk), or alternatively they are available on request, via the contact details on page 5.



## Glossary

Term	Definition
Balancing and Settlement Code (BSC)	The Balancing and Settlement Code contains the governance arrangements for electricity balancing and settlement in Great Britain. An over view document is available from " <a href="http://www.elexon.co.uk/wp-content/uploads/2012/03/trading_arrangements.pdf">http://www.elexon.co.uk/wp-content/uploads/2012/03/trading_arrangements.pdf</a> ".
CDCM	The Common Distribution Charging Methodology used for calculating charges to Designated Properties as required by standard licence condition 13A.
CDCM Model	An Excel Model as defined in Schedule 16 of DCUSA and used for the calculation of LV and HV DUoS Charges.
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 though an Exit Point. Or A person from whom a User purchases, or proposes to purchase, electricity, at an Entry Point (who may from time to time be supplied with electricity as a Customer of that User (or another electricity Supplier) through an Exit Point).
Designated EHV Properties	As defined in standard condition 13B of the Electricity Distribution Licence
Designated Properties	As defined in standard condition 13A of the Electricity Distribution Licence
Distribution Connection and Use of System Agreement (DCUSA)	The Distribution Connection and Use of System Agreement (DCUSA) is a multi-party contract between the licensed Electricity Distributors, Suppliers and generators of Great Britain It is a requirement that all licensed Electricity Distributors and Suppliers become parties to the DCUSA.
Distribution Network Operator (DNO)	An Electricity Distributor who operates one of the fourteen 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 Authority that a DNO as Distribution Services Provider will operate.

Term	Definition
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 grid supply points or generation sets or other Entry Points to the points of delivery to Customers or Users; or any transmission licensee in its capacity as operator of that licensee's transmission system or the 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.
EDCM	The EHV Distribution Charging Methodology used for calculating charges to Designated EHV Properties as required by standard licence condition 13B.
EDCM Model	An Excel Model as defined in Schedule 18 of DCUSA and used for the calculation of EHV DUoS Charges.
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.
Entry Point	A boundary point at which electricity is exported onto a Distribution System to a connected installation or to another Distribution System, not forming part of the total system ( boundary point and total system having the meaning given to those terms in the BSC)
Exit Point	A point of connection at which a supply of electricity may flow from the Distribution System to the Customer's Installation or User's Installation or the Distribution System of another person.
Extra High Voltage (EHV)	Nominal voltages of 22kV and above.
Gas and Electricity Markets Authority (GEMA) (the Authority)	As established by the Utilities Act.
Grid Supply Point	A metered connection between the National Grid Electricity Transmission (NGET) system and the Licensee's Distribution System at which electricity flows to or from the Distribution System.
GSP Group	Grid Supply Point Group; a distinct electrical system, that is supplied from one or more Grid Supply Points 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
Host DNO	A distribution network operator that is responsible for a Distribution Services Area as defined in Standard conditions of the Electricity Distribution Licence

Term	Definition
Intermediate LDNO	An embedded licensed distribution network operator that is responsible for a Distribution System between a Host DNO and another Embedded Distribution System.
LDNO	Licensed Distribution Network Operator.
Low Voltage (LV)	Nominal voltages below 1kV
Metering Point	The point at which electricity 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 Grid Supply Points are not 'Metering Points')
MRA	The Master Registration Agreement.
Ofgem	Office of Gas and Electricity Markets – Ofgem is governed by GEMA and is responsible for the regulation of the distribution companies.
Supplier	An organisation with a Supply Licence which can register itself as supplying electricity to a Metering Point.
Use of System Charges	Charges for demand and generation Customers which are connected to and utilising the distribution network.
User/s	Someone who has a Use of System agreement with the DNO e.g. A Supplier, Generator or LDNO.