



**STATEMENT OF CHARGES FOR USE
OF SP MANWEB's ELECTRICITY DISTRIBUTION
NETWORK**

This statement is effective from 1st November 2009

SP Energy Networks
New Alderston House
Dove Wynd
Strathclyde Business Park
Bellshill
ML4 3FF

CONTENTS

1. Introduction	4
2. Tariff Application and Charging Definitions	4
Demand.....	4
Billing and payment by settlement class	4
Site specific billing and payment	5
Unmetered supplies	5
Extra High Voltage (EHV) supplies.....	6
kVA of Maximum Demand.....	6
Maximum Import Capacity	7
Chargeable Import Capacity.....	7
Reactive Power Charges – Import.....	7
Generation	8
Generation supplies	8
kVA of Maximum Export	8
Maximum Export Capacity	9
Chargeable Export Capacity.....	9
Reactive Power Charges – Generation.....	9
Explanatory notes, capacity management	9
3. Schedule of Demand Tariffs	11
UoS Charges - available from 1 November 2009	11
Table 3.1 Tariffs	11
Accompanying Notes for Domestic Tariffs	14
Accompanying Notes for IDNO Tariffs.....	16
Accompanying Notes for Business Tariffs	16

Accompanying Notes for Preserved Tariffs	19
Accompanying Notes for Unmetered Supplies Tariffs	20
UoS Charges for Out of Area Networks	21
Table 3.7 Metering Functionality and Data Requirements	22
4. Table 4.1 Generation DUoS Charges	25
5. System Loss Adjustment Factors	26
Role of Loss Adjustment Factors In the Supply of Electricity.....	26
Role of Loss Adjustment Factors In the Generation of Electricity	26
Table of standard Loss Adjustment Factors	27
6. Network Unavailability Rebates	29
7. Glossary of terms	30

1. Introduction

- 1.1 This statement has been produced by us to inform Suppliers, Generators and IDNOs of our Distribution Use of System (DUoS) charges. It has been constructed in a way which reflects the requirements of Standard Condition 4A of our Distribution Licence. It contains information on our Tariff Application and Charging Definitions, provides for an in depth view of how we charge for Use of System in accordance with the requirements of paragraph 2 (a) of SLC4A, and also gives information on our Loss Adjustment Factors and any rebates against our Use of System charges.
- 1.2 If you need to contact us regarding any aspect of this document please write to or telephone our Pricing Team at:

SP Energy Networks
Regulation
New Alderston House
Dove Wynd
Strathclyde Business Park
Bellshill
ML4 3FF

Telephone: 0151 609 2359

2. Tariff Application and Charging Definitions

Demand

Billing and payment by settlement class

- 2.1 The following paragraphs are provided to help you to understand our Settlements (Supercustomer) related tariffs and their structures, as shown in SP Manweb's Market Domain Data Tables, and the conditions of use of these tariffs. We enclose a web-link to our Regulatory Documents / Charging page below from which you can gain access to our Supercustomer Settlement Class combinations and their respective tariffs.

<http://www.scottishpower.com/ConnectionsUseMetering.htm>

- 2.2 We will charge Supercustomer tariffs through two main charging components, which are Fixed Charges and kWh charges. The kWh charge will be based on the active import registers on the metering system at your customer's premises. More than one kWh charge will be applied to those tariffs which are classed as multi-rate.
- 2.3 Our charges vary according to the voltage of the supply and in some cases application is limited on supply capacity and/or unit consumption. Charges are shown exclusive of VAT, which shall be charged at the appropriate rate.
- 2.4 The Tables within this document that relate to Supercustomer billed tariffs are:
- Table 3.1, Section 1, for Domestic DUoS tariffs, profile class (PC) 1&2.

- Table 3.1, Section 2, for Non-Domestic DUoS tariffs, PC 3&4.
- Table 3.1, Section 3, for NHH Maximum Demand DUoS tariffs, PC 5-8.
- Table 3.1, Section 5, for Unmetered Supplies DUoS tariffs.
- Table 3.1, Section 7, for Preserved NHH DUoS tariffs.

Site specific billing and payment

- 2.5 The following paragraphs are provided to aid your understanding of our Site Specific tariffs and their structures, as shown in SP Manweb's Market Domain Data Tables, and the conditions of use for these tariffs. These charges will relate to a specific customer site, and are therefore billed on an individual site basis. We enclose a web-link below to our Regulatory Documents / Charging page from which you can gain access to our Site Specific Settlement Class combinations and their respective tariffs.

<http://www.scottishpower.com/ConnectionsUseMetering.htm>.

- 2.6 Our charges will be based on a range of tariff components:

- A Fixed charge per site;
- kWh charges based on the active import registers as provided by the metering system on site;
- Capacity (or availability) charges to reflect the site capacity usage;
- Reactive Charges

- 2.7 Our charges vary according to the voltage of the supply and application is limited on supply capacity and/or unit consumption. Charges are shown exclusive of VAT, which shall be charged at the appropriate rate.

- 2.8 The tables within this document which relate to Site Specific tariffs are:

- Table 3.1, Section 4, for HH Maximum Demand DUoS tariffs.
- Table 3.1, Section 7, for Preserved HH DUoS tariffs.

Unmetered supplies

- 2.9 These tariffs are available for supplies, which SP Manweb deems as being suitable as Unmetered Supplies. The criteria for deciding suitability are:

- a) where it is financially or technically impractical to install meters or carry out meter reading; or
- b) where the load is small and the consumption is reasonably predictable. Supplies where consumption is dependent on some factor, temperature for example, or where the load could be easily be increased without the

knowledge of SP Manweb will not normally be allowed to be connected without a meter.

The privilege of being connected without a meter is conditional on the customer providing and maintaining an accurate and auditable inventory.

Extra High Voltage (EHV) supplies

2.10 EHV sites are allocated site specific DUoS tariffs. EHV sites are defined, in Special Condition A1 of the Electricity Distribution Licence, as sites connected to our distribution system at a voltage of higher than 22 kV, or at a substation with a primary voltage of 66 kV or above.

2.11 Our charges will be based on a range of tariff components:

- A Fixed charge per site;
- A Sole-Use assets charge;
- A Capacity (or availability) charge to reflect the site capacity usage;
- Reactive Charges

2.12 The tables within this document which relate to the common elements of the EHV Site Specific DUoS tariffs are:

- Table 3.1, Section 6.

kVA of Maximum Demand

2.13 For those tariffs contained within Table 3.1, section 3, for Non-Half Hourly Maximum Demand customers, we will determine the kVA of Maximum Demand as the larger of the two numbers calculated as follows:

- a) from the maximum demand registered in the month, provided by the data from the meter; and
- b) by dividing the maximum demand by:
 - i) the power factor determined in the same month; or
 - ii) 0.95

2.14 For the purposes of i) and ii) above, the power factor will be derived from the advances of the kVARh and kWh meters. For those tariffs contained within Table 3.1, section 4, for Half Hourly customers, we will determine the kVA of Maximum Demand by selecting the maximum half hour value calculated using the formula below applied to the half hourly data from the billing period:

$$kVAMD = 2 \times \sqrt{(ActiveImport)^2 + (ReactiveImport)^2}$$

where;

kVAMD: kVA of Maximum Demand

ActiveImport: kWh of Active Import at Maximum Demand

ReactiveImport: kVArh of Reactive import at Maximum Demand

- 2.15 For Half Hourly Maximum Demand sites with generation the kVA of Maximum Demand in the month is calculated on a half hourly basis. Where Active Import is not equal to 0 and Active Export = 0, the following calculation is used:

$$kVAMD = 2 \times \sqrt{(ActiveImport)^2 + (NetReactive)^2}$$

where:

NetReactive: Reactive Import – Reactive Export

For all other scenarios no calculation would be carried out in that particular half hour.

Maximum Import Capacity

- 2.16 The Maximum Import Capacity means, in respect of an Exit Point, the Maximum amount of electricity, as agreed with SP Manweb, expressed in kilowatts or kilovoltampmeres, which may be imported from SP Manweb's Distribution System via that Exit Point. This will normally be stated in the Connection Agreement covering the premises. The Supplier will also be notified of this authorised figure, by SP Manweb, when he takes over registration of the premises.

Chargeable Import Capacity

- 2.17 The Chargeable Supply Capacity (kVA) shall, for any month, be the highest of:
- the kVA of Maximum Demand in that month; or
 - the Maximum Import Capacity.
- 2.18 Where connection is made to an embedded distribution network operated by another licensed distribution operator, demand at the boundary may grow over an extended period of time, prior to the development being fully developed. In these circumstances, the Chargeable Import Capacity will be the historical maximum of the kVA of Maximum Demand from 1 April in the current charging year.
- 2.19 Where the Chargeable Capacity exceeds the Maximum Import Capacity SP Manweb reserve the right to re-declare the Authorised Supply Capacity .

Reactive Power Charges – Import

- 2.20 For each kVArh consumed in excess of 33% of the number of active imported units (kWh) consumed in each month, a Reactive Power charge shall be made. This calculation shall be undertaken for each importing half-hour and aggregated over the month. Should the value for the month be negative then the charge shall be set to zero.

2.21 For sites with generation the Import Chargeable Reactive Units will be calculated as follows: In each half hour where Active Import is not equal to 0 and Active Export = 0, the following calculation is used:

where:

Net Reactive Import: Reactive Import – Reactive Export

For all other scenarios, no calculation will be carried out for that half hour, which would result in a 0.

- 2.22 The results for each half hour in the month are summated. Where the answer is positive then the charge will be Import Chargeable Reactive Units \times Charge Rate. If the result is negative no charge will apply.

Generation

Generation supplies

- 2.23 Generation UoS tariffs were introduced in April 2005 and the charge calculations are initially based on the estimated costs of Distributed Generation connections.
- 2.24 The actual published charges are based on our charging methodologies for Distributed Generation connections, which at a simple level are based on the estimated costs of connecting the installed capacity of the DG plant. In addition the charges at higher voltages will be location-specific, (i.e. site-specific charges for EHV Distributed Generation).
- 2.25 LV and HV charges are calculated on an average basis, across our Distribution Services Area, with EHV charges being calculated on a locational basis. Both are charged on a £/kW/per annum basis.
- 2.26 The tables within this document which relate to generation Use of System charges are:
 - Table 4.1.

kVA of Maximum Export

- 2.27 kVA of Maximum Export means twice the greatest number of kilovolt-ampere-hours exported during any thirty consecutive minutes in the relevant period. This will be calculated using the following formula:

where:

kVAME:

kVA of Maximum Export

ActiveExport:

kWh of Active Export at Maximum Export

NetReactive:

Reactive Import – Reactive Export

- 2.28 The kVA of Maximum Export in the month is calculated on a half hourly basis where Active Export is not equal to 0 and Active Import = 0. For all other scenarios no calculation would be carried out in that particular half hour.

Maximum Export Capacity

- 2.29 The Maximum Export Capacity means, in respect of an Entry Point, the Maximum amount of electricity, as agreed with SP Manweb, expressed in kilowatts or kilovoltamperes, which may be exported onto SP Manweb's Distribution System via that Entry Point. This will normally be stated in the Connection Agreement covering the premises. The Supplier will also be notified of this authorised figure, by SP Manweb, when he takes over registration of the premises.

Chargeable Export Capacity

- 2.30 The Chargeable Export Capacity (kVA) shall, for any month, be the highest of:
- the kVA of Maximum Export in that month; or
 - the Maximum Export Capacity.

Reactive Power Charges – Generation

- 2.31 Chargeable Reactive Units (kVARh) is the net kilovolt-amperes-reactive-hours imported in excess of the number obtained by multiplying the total kilowatt hours exported during the month by 0.33. The following calculation is used to determine the Export Chargeable Reactive Units in each half hour:

$$\text{Chargeable Reactive Units} = \text{Net Reactive} - (0.33 \times \text{Active Export})$$

where:

NetReactive: Reactive Import – Reactive Export

ActiveExport: Total active export consumption

- 2.32 Where Active Export is not equal to 0 and Active Import = 0, the previous formula is used. For all other scenarios, no calculation will be carried out for that half hour, which would result in a 0. The results for each half hour in the month are summated. Where the answer is positive then the charge will be Export Chargeable Reactive Units × Charge Rate. If the result is negative then no charge will apply.

Explanatory notes, capacity management

- 2.33 Where the Maximum (Import or Export) Capacity is re-declared during the Year of Use, the existing Maximum Capacity will be updated to reflect the re-declared value. The re-declared value will be chargeable for any Billing Period or part of a Billing Period during which the revised value became effective.
- 2.34 Requests to increase or decrease Maximum Capacity need to be submitted formally to SP Manweb. No reduction in Maximum Capacity will normally be permitted for a period of 5 years from the date that the capacity was first made available at the premises, or from the date at which a change in capacity (involving expenditure by SP Manweb) was

provided.

- 2.35 Subject to the above, reductions in Maximum Capacity will normally be permitted at intervals of not less than one year, providing that at least 28 days prior written notice of such a change has been given to SP Manweb.

3. Schedule of Demand Tariffs

UoS Charges - available from 1 November 2009

Table 3.1 Tariffs

Tariff No.	Tariff Description	LLFC	Market	PC	Fixed Charges		Unit Charges		Capacity Charges	Reactive Power Charges
					Fixed Charge 1 (p/MPAN/day)	Fixed Charge 2 (p/MPAN/day)	Day Unit Charge (p/kWh)	Night Unit Charge (p/kWh)	Capacity Charge (p/kVA/day)	Reactive Power Charge (p/kVArh)
	Section 1. Domestic									
T01	Domestic Unrestricted	101, 102	NHH - import	1	3.90		1.61			
T02	Domestic Heating	111, 131, 133, 147, 149, 112, 132, 134, 148, 150, 113, 114, 115, 116, 119, 120, 103, 105, 117	NHH - import	2	4.49		1.77	0.58		
T03	Domestic Control	104, 106, 153,	NHH - import	2			0.58			
T04	Metered Cyclocontrol	155	NHH - import	2	4.49		1.01			
	Section 2. Non-Domestic									
T08	Business Single Rate, LVN	201, 202	NHH - import	3	9.00		1.54			
T09	Business Two Rate, LVN	205, 231, 232, 211	NHH - import	4	15.17		1.70	0.40		
T10	Business Peak, LVN & LVS	203, 209	NHH - import	3	9.00		1.54	1.54		
T11	Business Control, Credit, LVN	212	NHH - import	4			0.40			
	Section 3. NHH MD									
T12	Business MD, LVN	401, 402	NHH LVN - import	5-8	52.67		1.35	0.25		
T13	Business MD, LVS	403, 404	NHH LVS - import	5-8	39.39		1.38	0.23		
	Section 4. HH MD									
M26	Business HH, LVN	511	HH LVN - import	0	31.29		1.16	0.21	1.49	0.30
M27	Business HH, LVS	513	HH LVS - import	0	22.12		1.17	0.20	0.65	0.30
M36	Business HH, LVN Generator import	591	HH LVN - import	0	31.29		1.16	0.21	1.49	0.30

Tariff No.	Tariff Description	LLFC	Market	PC	Fixed Charges		Unit Charges		Capacity Charges	Reactive Power Charges
					Fixed Charge 1 (p/MPAN/day)	Fixed Charge 2 (p/MPAN/day)	Day Unit Charge (p/kWh)	Night Unit Charge (p/kWh)	Capacity Charge (p/kVA/day)	Reactive Power Charge (p/kVArh)
M37	Business HH, LVS Generator import	592	HH LVS - import	0	22.12		1.17	0.20	0.65	0.30
M28	Business HH, HVN	515	HH HVN - import	0	445.09		0.90	0.15	1.40	0.20
M29	Business HH, HVS	517	HH HVS - import	0	22.12		0.68	0.09	0.62	0.20
M38	Business HH, HVN Generator import	593	HH HVN - import	0	445.09		0.90	0.15	1.40	0.20
M39	Business HH, HVS Generator import	594	HH HVS - import	0	22.12		0.68	0.09	0.62	0.20
Section 5. Unmetered Tariffs.										
T15	UMS, good inventory	900, 901, 902, 903, 910	NHH - UMS	1&8	0.48		1.80			
T16	UMS, poor inventory	904, 905, 906, 907	NHH - UMS	1&8	0.48		2.08			
Section 6. EHV tariffs										
	132kV connected	801+	HH EHV - import	0	854.93	Site Specific			1.02	0.12
	33kV connected	801+	HH EHV - import	0	854.93	Site Specific			2.68	0.12
Section 7. Preserved Tariffs										
T02	White Meter 8	145, 146	NHH - import	2	4.49		1.77	0.58		
T05	Off Peak A	135, 140, 233	NHH - import	2&4			1.08			
T06	Off Peak C	136, 141, 234	NHH - import	2&4			0.73			
T07	Off Peak D	137, 142, 235, 237	NHH - import	2&4			1.01			
T03	Off Peak E	138, 143, 236	NHH - import	2			0.58			
T08	Business LV Substation, Single Rate	207	NHH - import	3	9.00		1.54			
T09	Business LV Substation, Two Rate	208, 210	NHH - import	4	15.17		1.70	0.40		
T14	Business MD, HVN	405	NHH HV - import	5-8	445.09		0.90	0.15	1.40	0.30
M16	Business HH, LVN	501	HH LVN - import	0	31.29		1.16	0.21	1.49	0.30
M17	Business HH, LVS	503	HH LVS - import	0	22.12		1.17	0.20	0.65	0.30
M18	Business HH, HVN	505	HH HVN - import	0	445.09		0.90	0.15	1.40	0.20
M19	Business HH, HVS	507	HH HVS - import	0	22.12		0.68	0.09	0.62	0.20
T15	Unmetered, Cyclocontrol, good inventory	912	NHH - UMS	1&8	0.48		1.80			

Tariff No.	Tariff Description	LLFC	Market	PC	Fixed Charges		Unit Charges		Capacity Charges	Reactive Power Charges
					Fixed Charge 1 (p/MPAN/day)	Fixed Charge 2 (p/MPAN/day)	Day Unit Charge (p/kWh)	Night Unit Charge (p/kWh)	Capacity Charge (p/kVA/day)	Reactive Power Charge (p/kVArh)
T16	Unmetered, Cyclocontrol, bad inventory	913	NHH - UMS	1&8	0.48		2.08			
	Section 8. IDNO Tariffs									
	LV Predominately domestic LDNO	N/A	N/A	N/A	3.06		1.21	0.40		
	LV Predominately non domestic LDNO	N/A	N/A	N/A	21.31		0.79	0.14	1.01	
	HV Predominately domestic LDNO	N/A	N/A	N/A	2.51		0.99	0.32		

Accompanying Notes for Domestic Tariffs

The Domestic group of tariffs is available for supplies of electricity for use exclusively for domestic purposes in a private residence.

Other supplies that may be treated as Domestic are:

1. A separately metered supply of electricity for domestic purposes in a detached garage.
2. Residential accommodation (e.g. boarding houses, children or old people's homes, nurses' residences), which have ten or less assessable rooms.
3. Staircase lighting in residential accommodation either:
 - a) Provided by the landlord who is a part occupier of the premises and has a personal domestic supply, or
 - b) Separately metered and provided by the landlord who is not an occupier of the premises.
4. Separately metered communal services in residential accommodation where the total installed load does not exceed 5kW.

Where the supply of electricity is used partly for domestic purposes and partly for the purposes of or in connection with any trade, business or profession (including farming), a business tariff will apply.

Table 3.2 Domestic Tariff Conditions

TARIFF	LLFC	CONDITIONS	NOTES
Domestic Unrestricted, T01	101, 102	All units charged at the same rate.	
Domestic Heating (E7), T02	111, 131, 133, 147, 149, 112, 132, 134, 148, 150	7 consecutive hours at "night" rate available between 12.00 midnight and 8.00am. All other times charged at higher rate.	GMT See Footnote ¹
Domestic Heating Option 14, T02	119, 120	3 hours at "low" rate available from 1.00pm to 4.00pm and 11 hours from 9.00pm to 8.00am. All other times charged at higher rate.	Clock Time See Footnote ¹
Domestic Heating Twinheat, T02	113, 114, 115, 116	7 hours at "low" rate from 9.00pm to 1.00am and 12.00 noon to 3.00pm OR from 3.00am to 7.00am and 1.30pm to 4.30pm. All other times charged at higher rate.	Clock Time See Footnote ¹
Domestic Day/night, Domestic control, T02/03	103, 104, 105, 106	7 consecutive hours at "night" rate between 00.30am and 07.30am. Remaining hours on "day" rate. Controlled circuit variable hours according to weather. These two regimes must be taken together. Two supply numbers will be allocated.	GMT

<u>TARIFF</u>	<u>LLFC</u>	<u>CONDITIONS</u>	<u>NOTES</u>
Domestic Economy 10, T02	117	10 hours at “low” rate from 4.30am to 7.30am, 1.00pm to 4.00pm and 8.30pm to 12.30am. All other times charged at higher rate.	Clock Time

¹ From time to time SP Manweb will publish a list of areas within which the timing of switched load on two-rate tariffs is restricted

Accompanying Notes for IDNO Tariffs

In order to determine whether a site qualifies as “predominantly domestic” or “predominantly non-domestic”, the following criteria is followed:

- a. Predominantly domestic – means greater than 60% of the maximum demand due to domestic connections.
- b. Predominantly non-domestic – means less than 40% of the maximum demand due to domestic connections.
- c. Where between 40%-60% of the site maximum demand is assessed to be due to domestic connections the classification of the site will be made with the agreement of the IDNO after the consideration of the characteristics of the connection.

The contribution to maximum demand will be based on the make-up of the load for the completed IDNO network and will not be subject to change for minimum period of 12 months.

IDNO tariffs for HV-connected networks will be predominantly domestic. HV IDNO sites are able to choose to continue in the existing HV HH commercial tariff.

Sites will be considered to be predominantly domestic unless the IDNO makes the case to SPEN that they are predominantly non-domestic. Likewise, new sites will be given a default of predominantly domestic unless the IDNO provides evidence that it is predominantly non-domestic.

Day and night unit rates will be applied to boundary meter readings.

The discounted fixed charge will be applied to embedded network based on the monthly total MPAN count of IDNO’s network users. This data for the relevant chargeable month will be provided by the IDNO at least one week before end of each month. Where an IDNO is unable to provide an accurate MPAN count, we will derive an estimate of the MPAN count.

Capacity charges, where applicable, will be applied to the historical maximum capacity of the site, as per the “capacity ramping” method.

Accompanying Notes for Business Tariffs

Available where a Domestic DUoS Tariff does not apply.

Table 3.3 Business Tariff Conditions

<u>TARIFF</u>	<u>LLFC</u>	<u>CONDITIONS</u>	<u>NOTES</u>
Business LV Network Single Rate, T08	201, 202	For supplies from the Low Voltage Network, where a single rate supply tariff applies. Available to customers with a capacity of less than 45kVA.	
Business LV Network Two Rate, T09	205, 231, 232	For supplies from the Low Voltage Network, with a multi-rate supply tariff. where the night period is 11.30pm to 6.30am or 12.30am to 7.30am. Available to customers with a capacity of less than 45kVA.	GMT
Business day/night and Control, T09/11	211, 212	7 consecutive hours at "night" rate between 00.30am and 07.30am. Remaining hours on "day" rate. Controlled circuit variable hours according to weather. These two regimes must be taken together. Two supply numbers will be allocated. Available to customers with a capacity of less than 45kVA.	GMT
Business LV Network MD T12	401, 402	For supplies from the Low Voltage Network, with a non half-hourly metered monthly tariff where the "night" period is from 11.30pm to 6.30am.	GMT
Business LV Substation MD, T13	403, 404	For Substation Supplies at Low Voltage, with a HV transformer on site, and with a non half-hourly metered monthly tariff where the night period is from 11.30pm to 6.30am and where the substation accommodation is provided, owned and maintained by the customer, at their expense, to SP Manweb's requirements and the customer has granted SP Manweb secure rights a licence to occupy the substation accommodation to SP Manweb's satisfaction.	GMT
Business MD, HVN, T14	405	For supplies from the High Voltage Network, with a non half-hourly metered monthly tariff where the "night" period is from 11.30pm to 6.30am.	GMT
Business HH LV Network, M26/M36	511, 591	For supplies from the Low Voltage Network, with a monthly tariff where the "night" rate is from 11.30pm to 6.30am. Mandatory for customers with a maximum demand of 100kW and above. Customers with maximum demand of less than 100kW can elect to go on this tariff. M36 - generator import tariff.	GMT

<u>TARIFF</u>	<u>LLFC</u>	<u>CONDITIONS</u>	<u>NOTES</u>
Business HH LV Substation M27/M37	513, 592	<p>For Substation Supplies at Low Voltage, with a HV transformer on site, and with a monthly tariff where the "night" rate is from 11.30pm to 6.30am and where the substation accommodation is provided, owned and maintained by the customer, at their expense, to SP Manweb's requirements and the customer has granted SP Manweb secure rights to occupy the substation accommodation to SP Manweb's satisfaction.</p> <p>Mandatory for customers with a maximum demand of 100kW and above. Customers with maximum demand of less than 100kW can elect to go on this tariff.</p> <p>M37 – generator import tariff.</p>	GMT
Business HH HV Network M28/M38	515, 593	<p>For supplies from the High Voltage Network, with a monthly tariff where the "night" rate is from 11.30pm to 6.30am.</p> <p>Mandatory for customers with a maximum demand of 100kW and above. Customers with maximum demand of less than 100kW can elect to go on this tariff.</p> <p>M38 – generator import tariff.</p>	GMT
Business HH HV Substation M29/M39	517, 594	<p>For Substation Supplies at High Voltage, with a 33 kV transformer on site, and with a monthly tariff where the "night" rate is from 11.30pm to 6.30am and where the substation accommodation is provided, owned and maintained by the customer, at their expense, to SP Manweb's requirements and the customer has granted SP Manweb secure rights to occupy the substation accommodation to SP Manweb's satisfaction.</p> <p>Mandatory for customers with a maximum demand of 100kW and above. Customers with maximum demand of less than 100kW can elect to go on this tariff.</p> <p>M39 – generator import tariff.</p>	GMT
Unmetered Good Inventory, T15	900, 901, 902, 903, 910	Available for unmetered supplies whose pattern of use is reasonably predictable, for which a detailed and accurate inventory of connected equipment is provided.	
Unmetered Poor Inventory, T16	904, 905, 906, 907	Available for unmetered supplies whose pattern of use is reasonably predictable, for which a detailed and accurate inventory is not provided.	

Accompanying Notes for Preserved Tariffs

- Distribution Use of System LLF Codes 131, 132, 133, 134, 135, 136, 137, 138, 140, 141, 142, 143, 145, 146, 147, 148, 149, 150, 153, 155, 203, 207, 208, 209, 233, 234, 235, 236, 237, 405, 501, 503, 505, 507, 912, 913 are Preserved tariffs. As such, they are only available to existing supplies, subject to certain conditions:
 - a) Suppliers may not normally transfer a meter point from one preserved tariff to another preserved tariff;
 - b) If a supply under a preserved tariff should cease, other than on change of tenancy, the preserved tariff may not normally be restored;
 - c) Any additional load required to be supplied on the preserved tariff must be within the existing supply capacity.

Accompanying Notes for Unmetered Supplies Tariffs

- Distribution Use of System LLF Codes 900, 901, 902, 903, 904, 905, 906, 907, 910 are available to supplies, which SP Manweb deems as being suitable as Unmetered Supplies. The criteria for deciding suitability are:
 - a) where it is financially or technically impractical to install meters or carry out meter reading; or
 - b) where the load is small and the consumption is reasonably predictable. Supplies where consumption is dependent on some factor, temperature for example, or where the load could be easily be increased without the knowledge of SP Manweb will not normally be allowed to be connected without a meter.

The privilege of being connected without a meter is conditional on the customer providing and maintaining an accurate and auditable inventory.

Where SP Manweb has approved the inventory, via the certificate of Estimated Annual Consumption, the supplies will qualify for the relevant Good Inventory tariff (T15).

Table 3.5 Unmetered Supplies Conditions

<u>TARIFF</u>	<u>LLFC</u>	<u>CONDITIONS</u>	<u>NOTES</u>
Unmetered Good Inventory, T15	900, 901, 902, 903, 910	Available for unmetered supplies whose pattern of use is reasonably predictable, for which a detailed and accurate inventory of connected equipment is provided.	
Unmetered Poor Inventory, T16	904, 905, 906, 907	Available for unmetered supplies whose pattern of use is reasonably predictable, for which a detailed and accurate inventory is not provided.	

UoS Charges for Out of Area Networks

SP Manweb has no Out of Area DUoS tariffs.

Table 3.7 Metering Functionality and Data Requirements

DUoS Tariff	LLFC	Application	Metering Functionality	Meter Reading Frequency	Time for Provision of Data to Distributor
T01	101	single phase or polyphase supply to domestic property - credit	kWh total	quarterly ₁	Supercustomer
T01	102	single phase or polyphase supply to domestic property - prepayment	kWh total	quarterly ₁	Supercustomer
T02	111, 131, 133, 147, 149, 113, 115, 119, 145	single phase or polyphase supply to domestic property - credit	kWh rate 1 ₂ kWh rate 2	quarterly ₁	Supercustomer
T02	112, 132, 134, 148, 150, 114, 116, 120, 146	single phase or polyphase supply to domestic property - prepayment	kWh rate 1 ₂ kWh rate 2	quarterly ₁	Supercustomer
T02, T03	103, 104	Single phase or polyphase supply to domestic property – credit with separately wired circuit	kWh rate 1 ₂ kWh rate 2 kWh rate 3	quarterly ₁	Supercustomer
T02, T03	105, 106	Single phase or polyphase supply to domestic property – prepayment with separately wired circuit	kWh rate 1 ₂ kWh rate 2 kWh rate 3	quarterly ₁	Supercustomer
T03, T04, T05, T06, T07	135, 233, 136, 234, 137, 235, 138, 236, 237, 153, 155	Off Peak separately wired circuit - credit	kWh total	quarterly ₁	Supercustomer
T03, T04, T05, T06, T07	140, , 141, , 142, , 143,	Off Peak separately wired circuit - prepayment	kWh total	quarterly ₁	Supercustomer
T08	201	single phase or polyphase supply to business from LV network taking less than 45kVA - credit	kWh total	quarterly ₁	Supercustomer
T08	202	single phase or polyphase supply to business from LV network taking less than 45kVA - prepayment	kWh total	quarterly ₁	Supercustomer
T09, T10	205, 231, 203	single phase or polyphase supply to business from LV network taking less than 45kVA - credit	kWh rate 1 ₂ kWh rate 2	quarterly ₁	Supercustomer
T09	232	single phase or polyphase supply to business from LV network taking less than 45kVA - prepayment	kWh rate 1 ₂ kWh rate 2	quarterly ₁	Supercustomer
T08	207	supply to a business from an LV substation, taking less than 45kVA	kWh total	quarterly ₁	Supercustomer
T09, T11	210, 208, 209	supply to a business from an LV substation, taking less than 45kVA	kWh rate 1 ₂ kWh rate 2	quarterly ₁	Supercustomer

DUoS Tariff	LLFC	Application	Metering Functionality	Meter Reading Frequency	Time for Provision of Data to Distributor
T09, T11	211, 212	Single phase or polyphase supply to business property with separately wired circuit from LV network taking less than 45 kVA–credit	kWh rate 1 ₂ kWh rate 2 kWh rate 3	quarterly ₁	Supercustomer
T12	401, 402	supply to a business from the LV network taking less than 100kW	kWh total kWh rate 1 ₂ kWh rate 2 Peak kW (4-7pm Mon - Fri Nov - Feb) 24 hour kW 24 hour kVAr kVArh total	monthly	within three working days of meter read
T13	403, 404	supply to a business from an LV substation taking less than 100kW	kWh total kWh rate 1 ₂ kWh rate 2 Peak kW (4-7pm Mon - Fri Nov - Feb) 24 hour kW 24 hour kVAr kVArh total	monthly	within three working days of meter read
T14	405	supply to a business from the HV network taking less than 100kW	kWh total kWh rate 1 ₂ kWh rate 2 Peak kW (4-7pm Mon - Fri Nov - Feb) 24 hour kW 24 hour kVAr kVArh total	monthly	within three working days of meter read
M16 M26 M36	501, 511, 591	supply to a business from the LV network taking 100kW or more	kWh total kWh rate 1 ₂ kWh rate 2 Peak kW (4-7pm Mon - Fri Nov - Feb) 24 hour kW 24 hour kVAr kVArh total	half hourly	within three working days
M17 M27 M37	503, 513, 592	supply to a business from an LV substation, taking 100kW or more	kWh total kWh rate 1 ₂ kWh rate 2 Peak kW (4-7pm Mon - Fri Nov - Feb) 24 hour kW 24 hour kVAr kVArh total	half hourly	within three working days

DUoS Tariff	LLFC	Application	Metering Functionality	Meter Reading Frequency	Time for Provision of Data to Distributor
M18 M28 M38	505, 515, 593	supply to a business from the HV network taking 100kW or more	kWh total kWh rate 1 ₂ kWh rate 2 Peak kW (4-7pm Mon - Fri Nov - Feb) 24 hour kW 24 hour kVAr kVArh total	half hourly	within three working days
M19 M29 M39	507, 517, 594	supply to a business from an HV substation taking 100kW or more	kWh total kWh rate 1 ₂ kWh rate 2 Peak kW (4-7pm Mon - Fri Nov - Feb) 24 hour kW 24 hour kVAr kVArh total	half hourly	within three working days
EHV site specific		supply taken at 33kV or higher	on application	on application	on application
Business maximum demand with on- site generation connected in parallel		supply taken from LV network, LV substation, HV network or HV substation	on application	on application	on application
T15, T16	900, 901, 902, 903, 904, 905, 906, 907, 910, 912, 913	supply covered by a certificate for unmetered supply	on application	on application	on application

₁ quarterly may mean less frequently for sites billed by Supercustomer. Further details available on request.

₂ for tariffs with two or more rates, the timings for each register should match one of the SSC combinations shown in MDD. Default tariff codes may be applied, subject to the details given in Table 6, where requests for any other SSC combinations are made.

4. Table 4.1 Generation DUoS Charges

Tariff No.	Tariff Description	LLFC	Market	PC	Fixed Charges	Unit Charges		Capacity/Demand Charges	Reactive Power Charges
					Fixed Charge 1 (p/MPAN/day)	Day Unit Charge 1 (p/kWh)	Night Unit Charge 1 (p/kWh)	Capacity Charge 1 (p/kVA/day)	Reactive Power Charge 1 (p/kVArh)
	LV connected generators with non-half-hourly metering		NHH - export	1-8				0.00	0.00
E01	LVN connected generators pre April 05	795	HH LVN - export	0					0.31
E02	LVS connected generators pre April 05	796	HH LVS - export	0					0.31
E05	LVN connected generators post April 05	791	HH LVN - export	0					0.31
E06	LVS connected generators post April 05	792	HH LVS - export	0					0.31
E03	HVN connected generators pre April 05	797	HH HVN - export	0					0.21
E04	HVS connected generators pre April 05	798	HH HVS - export	0					0.21
E07	HVN connected generators post April 05	793	HH HVN - export	0				0.26	0.21
E08	HVS connected generators post April 05	794	HH HVS - export	0				0.26	0.21
	EHV connected generators ANGLESEY	601+	HH EHV - export	0				2.50	0.12
	EHV connected generators NORTH WALES EXCLUDING ANGLESEY	601+	HH EHV - export	0				1.19	0.12
	EHV connected generators MID WALES	601+	HH EHV - export	0				0.66	0.12
	EHV connected generators MERSEYSIDE, CHESHIRE ETC	601+	HH EHV - export	0				0.62	0.12

5. System Loss Adjustment Factors

- 5.1. The total electrical losses on our distribution system are regulated in accordance with the price control set out in the Licence. Suppliers should refer to the table of loss adjustment factors to calculate the amount of electricity that they must provide. The same loss adjustment factors (LAFs) are reflected automatically in the settlement system.

Role of Loss Adjustment Factors In the Supply of Electricity

- 5.2. Authorised Electricity Operators providing a supply of electricity from any entry point into SP Manweb electricity distribution network, including a generator entry point embedded in the network or a supply point from the transmission network, will be required to demonstrate that at all times the amount of electricity entering the network is sufficient to meet the supply in accordance with the following adjustment factors.
- 5.3. Adequate supply can be demonstrated either by membership of the Balancing and Settlement Code, or by provision of metering information on the relevant supply and load(s). The table which follows indicates the factor by which supplies taken from the Grid Supply Point must exceed the take at the exit point from the network, varying according to the time of day, the season and the voltage of connection.

Role of Loss Adjustment Factors In the Generation of Electricity

- 5.4. For generators embedded in SP Manweb electricity distribution network, the output of the generator will be grossed up to the equivalent of grid supply point supplies in a way which conforms with the factors provided below.

Table of standard Loss Adjustment Factors

		Night	Other	Winter Weekday	Winter Peak	
		Period 1	Period 2	Period 3	Period 4	LLFC
Import	LV Non Half Hourly	1.076	1.091	1.103	1.117	101, 102, 103, 104, 105, 106, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 131, 132, 133, 134, 135, 136, 137, 138, 140, 141, 142, 143, 145, 146, 147, 148, 149, 150, 153, 155, 201, 202, 203, 205, 211, 212 231, 232, 233, 234, 235, 236, 237
	LV UMS	1.076	1.091	1.103	1.117	900, 901, 902, 903, 904, 905, 906, 907, 910, 912, 913
	LV Network connected	1.076	1.091	1.103	1.117	401, 402, 501, 511, 591
	LV Substation connected	1.055	1.060	1.065	1.071	207, 208, 209, 210, 403, 404, 503, 592, 513
	HV Network connected	1.032	1.039	1.044	1.049	405, 505, 515, 593
	HV Substation connected	1.023	1.027	1.030	1.032	507, 594, 517
	33kV generic	1.015	1.018	1.020	1.022	Site specific (800+)
	132kV generic	1.004	1.005	1.006	1.007	Site specific (800+)
Export	LV Network connected	1.076	1.091	1.103	1.117	781, 782, 783, 784, 785, 791, 795
	LV Substation connected	1.055	1.060	1.065	1.071	792, 796
	HV Network connected	1.032	1.039	1.044	1.049	793, 797
	HV Substation connected	1.023	1.027	1.030	1.032	794, 798
	33kV generic	1.015	1.018	1.020	1.022	Site specific (600+)
	132kV generic	1.004	1.005	1.006	1.007	Site specific (600+)

Notes on the Table

a. Times given are clock time. Time periods are defined as follows:

Period 1	Night	23.30-07.30	All Year
Period 2	Other	Any time outwith Periods 1, 3, 4	
Period 3	Winter Weekday	07.30-16.00	Mon-Fri 1 Nov - 28 Feb
		19.00-20.00	Mon-Fri 1 Nov - 28 Feb
Period 4	Winter Weekday Peak	16.00-19.00	Mon-Fri 1 Nov - 28 Feb

- b. Loads with a power factor of 0.95 or less may require individual assessment and will be allocated to a loss adjustment band according to power factor and voltage.
- c. Appendix 1 of the Licence Condition 4 Statement describes the methodology for the calculation of Loss Adjustment Factors shown in the above table.
- d. For premises connected at extra high voltage (that is, at a voltage at or higher than 22 kV or at a substation supply with a primary voltage of 66 kV or above), special assessment may be required to determine the loss adjustment factor(s) which are relevant to the particular exit point.

- e. The loss adjustment factors reflect the total losses on the SP Manweb' network attributable to the relevant customer groups.

6. Network Unavailability Rebates

- 6.1 For generators that are due network unavailability rebates, these will be calculated as follows:

Network Unavailability Rebates = £20 per MW of installed capacity × total duration of relevant interruptions (in hours). Subject to a maximum value of the annual use of system charges for the generator and a minimum value of £50.

7. Glossary of terms

7.1 The following definitions are included to aid understanding.

Act	The Electricity Act 1989 as amended by Utilities Act 2000, the Sustainable Energy Act 2003 and the Energy Act 2004.
Authorised Electricity Operator	Persons entitled, by licence or by exemption under the Act, to use SP Manweb' distribution network to supply, distribute or generate electricity.
Authorised Supply Capacity (ASC)	The agreed Authorised Supply Capacity measured in kilovoltampere you are allowed to take from the Distribution Network through your point of connection.
Authority	The Gas and Electricity Markets Authority (GEMA) – the regulatory body for the gas and electricity industries established under section 1 of the Utilities Act 2000.
BSC	Balancing and Settlements Code
Chargeable Capacity	Means whichever is higher between the Maximum Authorised Capacity and the Maximum Export or Maximum Import.
CUSC	The Connection and Use of System Code governing connection to and use of NGET's transmission system
Customer With Own Generation (CwoG)	A customer who has own generation and which is capable of being paralleled to our Distribution Network.
Distributed Generator	A generator with a direct connection to SP Manweb' distribution network.
Distribution Code	The Distribution Code of the Distributors of England and Wales. It is the document produced by each Distributor in accordance with Condition 9 of its Licence and approved by Ofgem to define the technical aspects and planning criteria of the working relationship between the Distributor and all those connected to its Distribution Network.
Distribution Licence	The Electricity Distribution Licence granted to SP Manweb Electricity PLC pursuant to section 6(1) of the Act.
Distribution Use of System Agreement (DuoSA)	The agreement between SP Manweb and an authorised electricity operator, which sets out the obligations of both parties for the use of SP Manweb' distribution network.
Distribution Use of System (DUoS)	Use of system charges for demand and generation customers which are connected to and utilising SP Manweb' distribution network.
Elxon	The Balancing and Settlements Company.
Extra high voltage (EHV)	22 kV or higher voltage or 11 or 6.6 kV if supplied directly from a transformer with a primary voltage of 132 kV. The permitted tolerance at these voltages is plus and minus 6%.
Generator Use	Generator Distribution Use of System charge.

of System (GDUoS)	
Grid Code	The document produced by NGET in accordance with its transmission licence and approved by Ofgem to define the technical aspects and planning criteria of the working relationships between NGET and all those connected to its transmission system and including, in certain aspects Distributed Generators.
Grid Supply Point (GSP)	A grid supply point is connection point at which the NGET's transmission network System is connected to SP Manweb' distribution network.
HH	Half hourly
High voltage (HV)	6.6 kV volt or 11 kV plus or minus 6% measured between any two phase conductors.
Installed Generation Capacity	The capacity provide to meet the maximum power required as requested by the party seeking to export onto the SP Manweb' distribution network.
kVAr	kilovoltampere reactive
kVA	kilovoltampere
kW	kilowatt
kWh	kilowatt hour
LLFC	Line Loss Factor Class
Low voltage (LV)	230 volt plus 10% or minus 6% measured between the neutral conductor and any phase conductor.
Maximum Export Capacity	The Maximum amount of electricity, as agreed with SP Manweb, which may be exported onto the SP Manweb Distribution System via an Entry Point. (Entry Point having the meaning given in the DCUSA) .
Maximum Import Capacity	The Maximum amount of electricity, as agreed with SP Manweb, which may be imported from the SP Manweb Distribution System via an Exit Point. (Exit Point having the meaning given in the DCUSA) .
MDD	Market Domain Data
MRA	Master Registration Agreement
MPAN	Meter Point Administration Number
MPAS	Meter Point Administration Service
National Grid Electricity Transmission (NGET)	The company that owns and operates the transmission network in England and Wales.
Network	The whole of our interconnected distribution equipment, including cables, overhead lines and substations, which we operate in accordance with our licence.
NHH	Non-half hourly
Ofgem	Ofgem is the Office of Gas and Electricity Markets that regulates the gas and electricity industries in Great Britain. Ofgem operates under the governance of the Gas and Electricity Markets Authority (sometimes referred to as the Authority or GEMA) which sets all major decisions and policy priorities.

Operation and Maintenance (O&M) percentage	The percentage rate of Operation and Maintenance is calculated as the percentage of the operation and maintenance costs to the modern equivalent value of the distribution network assets.
PC	Profile Class
Relevant Objectives	<p>The relevant objectives, as defined in our Electricity Distribution Licence, are:</p> <p>(a) That compliance with the use of system charging methodology facilitates the discharge by the licensee of the obligations imposed on it under the Act and by this licence;</p> <p>(b) That compliance with the use of system charging methodology facilitates competition in the generation and supply of electricity, and does not restrict, distort, or prevent competition in the transmission or distribution of electricity;</p> <p>(c) That compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable (taking account of implementation costs), the costs incurred by the licensee in its distribution business; and</p> <p>(d) That, so far as is consistent with sub-paragraph (a), (b) and (c), the use of system charging methodology, as far as is reasonably practicable, properly takes account of developments in the licensee's distribution business.</p>
Retail Price Index (RPI)	The general index of retail prices published by the Office for National Statistics each month.
Supplier	The company from whom you purchase electricity, or to whom you sell the exported electricity from your generation.
Supplier Volume Allocation Agent (SVAA)	The BSC agent for Supplier Volume Allocation.
Supplier Volume Allocation (SVA)	The determination of quantities of active energy to be taken into account for the purposes of Settlement in respect of Supplier BM Units.