



# SP Transmission & Distribution

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**METHODOLOGY STATEMENT DETAILING  
THE BASIS OF CHARGES FOR  
CONNECTION TO SP MANWEB PLC'S  
ELECTRICITY DISTRIBUTION SYSTEM**

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**CHARGES APPLICABLE 1<sup>ST</sup> DECEMBER 2006**

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**NOTE – THIS STATEMENT IS SUBJECT TO THE  
APPROVAL OF THE GAS AND ELECTRICITY MARKETS  
AUTHORITY.**

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## 1. INTRODUCTION

This statement describes the methodology and basis on which charges will be made for the provision of connections to SP Manweb Plc's electricity distribution system.

Words and expressions used in this statement have (unless specifically defined herein) the definitions given to them in the Electricity Act 1989 ('the Act') or SP Manweb's Distribution Licence ('the Licence') and shall be construed accordingly. Charges and costs 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 4 of the Licence.

This statement has been approved by the Gas and Electricity Markets Authority (the Authority). A fee of £10 (excluding VAT) will be payable for each copy of this statement which is provided in accordance with a request. The most recent version can also be obtained from the library section of the ScottishPower website at [www.ScottishPower.com](http://www.ScottishPower.com).

### 1.1 ScottishPower Companies

ScottishPower's Infrastructure Division includes the UK wires businesses, which comprises three asset-owning companies and an asset management company. This structure was introduced in October 2001 to comply with the Utilities Act 2000.

The companies within the Infrastructure Division are:

SP Transmission Ltd, which owns the transmission network in south and central Scotland (132 kV and above), and the Scottish land-based part of the interconnector linking Scotland and Northern Ireland;

SP Distribution Ltd, which owns the distribution network (from 33 kV downwards) in south and central Scotland;

SP Manweb Plc, whose distribution system is located in Merseyside, Cheshire and North Wales; and

SP Power Systems Ltd, which manages and maintains the networks on behalf of the three asset owners.

The three asset owning companies, which hold the transmission and distribution licenses, fall within the responsibility of SP Transmission & Distribution, a business unit within the ScottishPower Group.

### 1.2 Purpose of this statement

SP Manweb is obliged, under Licence Condition 4B, of its electricity distribution licence, to prepare a statement (the Connections Statement) setting out the methodology and basis on which charges will be made for the provision of connections to SP Manweb's electricity distribution system. This statement is subject to the approval of the Gas & Electricity Markets Authority.



This statement details the principles upon which charges for the connection to SP Manweb's system will be based and is in such detail as to enable a person to make a reasonable estimate of their connection charge. We are also obliged to review our statement and methodology at least annually to ensure it continues to achieve the 'relevant objectives' and, where necessary make such modifications to the connections methodology that better achieve these. The 'relevant objectives' are:

- (a) that compliance with the connection charging methodology facilitates the discharge by the licensee of the obligations imposed on it under the Act and by this licence;
- (b) that compliance with the connection 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;
- (c) that compliance with the connection 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
- (d) that, so far as is consistent with sub-paragraphs (a), (b) and (c), the connection charging methodology, as far as is reasonably practicable, properly takes account of developments in the licensee's distribution business.

Costs shown in this statement are current at the time of publication but are subject to change without notice.

Where a person requires a connection to SP Manweb's distribution system pursuant to section 16(1) of the Act, the provisions of this Statement are without prejudice to the provisions of sections 16 to 24 of the Act.

### **1.3 Connection and Use of System Boundary**

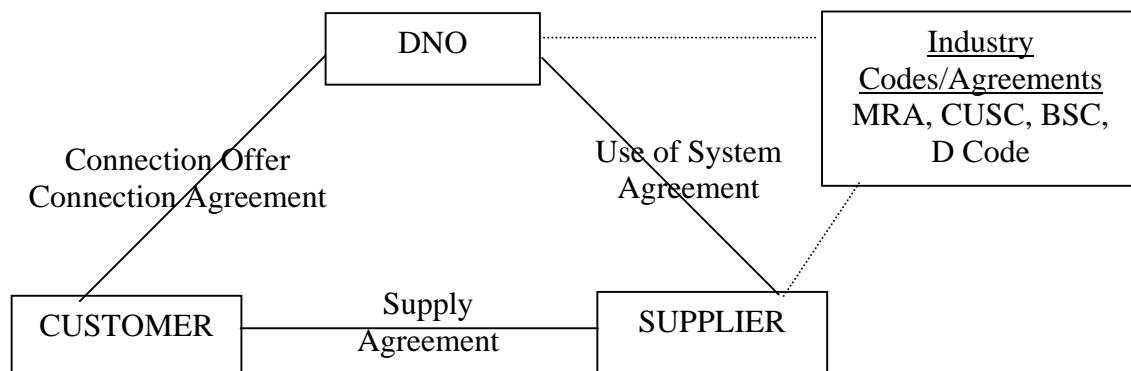
SP Manweb splits the recovery of costs into charges for connection to the distribution network and charges for use of the network. The boundary point on the network for demarcation of these charges is identified using common rules for both demand and generation customers. This document details the connection charging methodology that is used for calculation of connection charges and contains indicative charges and examples to aid understanding of connection charges.

### **1.4 The Contractual Framework**

Users entitled to use SP Manweb's electricity distribution system are those who are authorised by Licence or by exemption under the Act to supply, distribute or generate electricity. In order to protect all Users of the system, SP Manweb will require evidence of authorisation before agreeing terms for use of the system.



### High Level Contractual Framework



Users seeking to use the system will be required, prior to using the system, to enter into an agreement with SP Manweb setting out the obligations of both parties.

#### **1.5 Connection arrangements**

This statement provides information for any person applying for, or considering applying for, connection to SP Manweb's distribution system. This refers to either a single connection or a multiple connection, such as a housing development, requested by a single party and any request for increased capacity in respect of an existing connection.

Some of SP Manweb's responsibilities are undertaken by its agent, SP Power Systems Ltd. Both SP Distribution Ltd, SP Manweb Plc and SP Power Systems Ltd are wholly owned subsidiaries of ScottishPower UK plc.

Connections can be provided by SP Manweb under its current licence (Condition 4B), or a suitably accredited contractor appointed by the customer may carry out certain activities that are open to competition. This work is referred to as 'contestable work'. Section 4 of this statement contains details of the kinds of work that are contestable and the arrangements, which apply where a person chooses to appoint a suitably accredited contractor to carry out the contestable work.

- Works that have to be carried out by SP Manweb, is referred to as 'non-contestable work'. **Section 4** lists the types of work that are non-contestable.
- If you require SP Manweb to undertake the full connection work, then **Section 3** details the necessary procedures.
- If you require a suitably accredited contractor to undertake the contestable elements of the connection, then **Section 4** applies.

#### **1.6 Persons entitled to apply for a connection**

Application for a connection to SP Manweb's Distribution System can be made by:



- The owner or occupier of the premises or
- An authorised electricity operator or agent acting with the consent of the owner or occupier, for the purpose of conveying electricity to or from the premises (in this case, evidence of appointment must be provided on application) or
- An authorised distributor wishing to connect a Distribution System for the purpose of conveying electricity to or from that system.

For the avoidance of doubt, the premises or Distribution System must be metered or, by agreement, unmetered to allow a flow of electricity to pass across the point of connection (any other metering issues should be referred to the Supplier or prospective Supplier at the premises). The boundary between Distribution Systems must be metered by agreement between the parties.

## **1.7 Contact Information**

For enquiries about this statement, please contact in the first instance:-

Commercial Section  
SP PowerSystems  
Prenton Way  
Prenton  
CH43 3ET

Email: [commercial@sppowersystems.com](mailto:commercial@sppowersystems.com)

Tel. No. 0151 609 2022  
Fax No. 0151 609 2492/2240

For all connection enquiries, please contact:-

PowerSystems  
Customer Connections  
PO Box 8730  
Bellshill  
ML4 3YE

Tel. No. 01698 784567  
Fax. No. 01698 784777

Persons seeking further information on any aspect of this document may also contact:

Regulation Director  
SP Transmission & Distribution  
New Alderston House  
Strathclyde Business Park  
Bellshill ML4 3FF

Tel: 01698 413475  
Fax: 01698 413056



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## **2 CONNECTION CHARGING METHODOLOGY**

The charges payable in relation to the provision of a new or modified connection will be calculated in accordance with the principles set out below. These principles will also be incorporated into the terms and conditions set out in any resultant Connection Agreement relating to the connection point.

### **2.1 Costs Included in the Connection Charge**

The costs of assets required to connect a party to the existing network are chargeable in full as the Connection Charge. The assets may include extension works, e.g new overhead lines or cable, along with a contribution to the costs associated with the reinforcement (if any) of the existing distribution network as determined by the apportionment rules outlined in section 2.3.

The connection charge will reflect (subject to the principles set out in this Schedule) the following:-

- a) An estimate of the costs of the minimum work to be carried out by SP Manweb and of the assets to be provided and installed by SP Manweb for the specific benefit of the party seeking the connection;
- b) The costs of providing lines or plant to meet any abnormal features or special supply requirements of the connection. An illustrative list of such features is contained in Schedule 1.
- c) The cost of providing any enhanced requirements at the request of the party seeking connection
- d) In certain circumstances, however, the party seeking connection will be required to make a payment in respect of assets which have been installed previously and which are used for the purpose of providing this new supply as explained above. The circumstances are laid down in detail in The Electricity (Connection Charges) Regulations 2002 and The Electricity (Connection Charges) (Amendments) Regulations 2002, which came into force in June 2003. The method for charging will be based on the apportionment rules as detailed in Section 2.3.
- e) The Connection Charge will include a capitalised value of the operation and maintenance in cases where assets installed are above the normal level required for the security of supply to a specific connection. This capitalised value will be calculated from the estimated annual Operation and Maintenance calculated as a percentage of the assets value, the expected life of the assets and the cost of capital.

The work to be done and the connection charge payable will depend on the requirements of the party seeking the connection, on the condition of the distribution system at the point of connection, and on any other characteristics relevant to the connection. This would also include the effective capacity and voltage level of the relevant part of the system in relation to the requirements of the party seeking the connection.



Applications received from developers and generator enquiries may entail a meeting to discuss requirements. Such meetings to discuss the aspects of a connection request will be held at no cost. However SP Manweb may make a charge for subsequent meetings attended. Speculative developments in particular often require several meetings, which are prompted by changes to the final site layout, thereby necessitating the connection requirements to be redefined. SP Manweb reserves the right to recover all reasonable costs incurred in arriving as a suitable engineering solution following any request for a connection to the existing distribution system.

We reserve the right, following consultation with the party seeking connection, to apply appropriate terms in cases where the normal criteria may not apply, or where we have reasonable grounds to believe that the proposed connection would reduce the security of the Distribution System to a level below the standard required by the Act.

## **2.2 Minimum Design**

The costs to be recovered in the Connection Charge will be determined from the estimated costs of the minimum scheme which would be designed to meet the requirements of the connection and for the sole benefit of the party or parties being connected, consistent with sound engineering practices and SP Manweb's system design philosophy and subject to the specifications and standard sizes of equipment used by SP Manweb.

The minimum design will also ensure that the security of supply to existing customers is maintained. SP Manweb will design the minimum network solution to allow the connection of the relevant party and to meet the Required Capacity. The Required Capacity means the design capacity of the Connection at the ownership boundary, as agreed between the Connecting party and the Distributor, and laid down in the Connection Agreement. For multiple connections this may be after taking into account of demand diversity and appropriate design standards. Capacity may be for either importing or exporting to SP Manweb's network and subject to variation in power factor.

Where the scheme designed is of greater capacity than the practicable minimum scheme required for that connection, the costs in excess of that minimum scheme are normally borne by SP Manweb.

Where the minimum scheme is capable of accommodating additional connections, then the costs of the scheme may be apportioned accordingly.

In cases where the customer wishes to operate and maintain the connection and the Customer's installation includes using an overhead line or cable network, then under certain circumstances the Customer will be required to provide an additional circuit breaker and protection in series with SP Manweb's circuit breaker to protect the Customer's installation.



## 2.3 Reinforcement Apportionment Rules

Connecting parties, both demand and generation are required to contribute to reinforcement costs in proportion to their requirements. Apportionment rules provide sufficient locational signals within the connection charge, but equally recognise the benefit that other users will get from the assets installed.

In the case of network reinforcement the existing assets will be removed and in some cases will not be reusable, but in other cases will have some residual value. This value will be retained by SP Manweb on behalf of customers in general for future use on the network where appropriate.

Apportionment rules for reinforcement are split between an effective network capacity rule and a fault level rule, used when considering generation. There may be interactions between the rules on more complex schemes. The rules will be applied in a consistent manner, which means the security rule will apply to reinforcement works driven by compliance with the security requirement. Any other costs (not already apportioned accordingly to the security rule) associated with any reinforcement of assets to ensure the network fault levels remain within rating, will be apportioned according to the fault level rule.

The costs associated with the reinforcement of existing distribution network assets, (which for this purpose means works required by the new connection, but not for its sole use) up to one voltage level above, will be split with a share attributed to the connecting party based on their capacity requirements as part of their connection charge and the remainder recovered through use of system tariffs. For the avoidance of doubt, the point of connection and not the voltage of supply will determine the application of the one voltage rule. These rules apply to both demand and generation connections and apply to all distribution voltages and EHV. For further guidance on the application of these rules please refer to Schedule 4.

Reinforcement costs should be calculated as follows to determine the proportion of the reinforcement costs that should be paid by a party:-

### 2.3.1 Security requirements

The reinforcement works shall be driven by either thermal capacity or voltage or both and assessed against P2/6.

$$\text{Cost apportionment factor} = \frac{\text{Required Capacity} \times 100, \text{ maximum } 100\%}{\text{New Network Capacity}}$$

The New Network Capacity is the secure network capacity following the reinforcement of the relevant assets.

Where a customer requests an increase in capacity the increment of capacity will be used as the basis of apportioning cost.



### 2.3.2 **Fault Level Requirements**

Cost apportionment factor

$$= \frac{3 \times \text{Fault level contribution from connection} \times 100, \text{ max } 100\%}{\text{New Equipment Fault Level Capacity}}$$

The reinforcement works are driven by fault level restrictions. The rule should be used for all equipment types and voltages. This rule recognises that existing network fault levels are predominantly driven by the system connections (transformer impedance) and therefore the capacity is limited to the remaining headroom. It uses the 'New Equipment Fault Level Capacity', which is the equipment rating following the replacement of assets and recognises the granularity of equipment sizes and limits this exposure to connecting parties.

### 2.3.3 **Contribution to Existing Reinforcement Assets.**

In cases where reinforcement assets have been installed to allow the connection of a party and due to the incremental plant sizes spare capacity has been created a proportion of this cost will be recovered through Use of System tariffs. However if a subsequent party then connects to the network using some or all of the spare capacity, a proportion of the reinforcement costs should be charged to the second comer within the prescribed period of 5 years.

When SP Manweb adds transformer capacity to the network, then this is treated as connection asset unless any spare capacity is used to reinforce the existing network. In such cases the work is treated as reinforcement and the apportionment rules apply. If the assets are initially treated as connection and within 5 years another customer is connected to assets then the initial contributor is refunded based on the apportionment rules and the second comer pays in accordance with the apportionment rules.

## 2.4 **Infrastructure Developments & Speculative Developments**

### 2.4.1 **Infrastructure Developments**

An Infrastructure Development is a project where a third party requests SP Manweb to extend or reinforce the distribution system in advance of actual connection to individual premises and shall be treated in accordance with Section 22 of the Electricity Act.

### 2.4.2 **Speculative Developments**

A Speculative Development is similar to an Infrastructure Development but includes final connections to individual premises although there is uncertainty relating to the occupancy of the premises and shall be treated in accordance with Section 22 of the Electricity Act.

In both Infrastructures and Speculative developments, applicants will be expected to enter into a contractual arrangement for the provision of infrastructure extensions to SP Manweb's Distribution System based upon the information



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provided at the time of enquiry. The cost of this Distribution System extension will be charged in full.

For the purpose of paragraph 2.3 contributions to reinforcement will be based on the required capacity and the point of connection of the development. No refund will be provided if the anticipated load does not materialise.

#### **2.4.3 Adopted Connections**

For adopted Infrastructure Developments the assets will be adopted on energisation and no handover payment will apply.

#### **2.5 Generator Connections**

Where the connection will enable generation of electricity, reference should be made to the Distribution Code.

Where a generator imports reactive power at times when he is exporting real power, charges may be levied where the power factor drops below 0.928 leading. Please refer to the Distribution Use of System Charging Methodology and Charging Statement.

SP Manweb reserves the right to determine the terms applicable in cases where the normal criteria may not apply following consultation with the applicant or where SP Manweb has reasonable grounds for concluding that the proposed connection would reduce the security of the system to a level below the standard required by the Act or that normally provided to other customers.

Where the party seeking connection has installed or intends to install on-site generation and seeks connection to the system for the purposes of taking a supply from the system at any time (either intermittent or continuous), the principles for determining the charge for connection will be in accordance with this Statement. Such persons should contact the address on page 6 to discuss the prevailing requirements within both the Distribution Code and the Grid Code relating to on-site generation.

Where the reinforcement cost exceeds £200 per kW, then all costs in excess of this amount will be recovered as a connection charge. All sole use connection assets are paid for by the generator seeking connection.

##### **2.5.1 Small and Medium Embedded Power Stations.**

There will be some requests from a party seeking connection that have an impact or a potential impact on the transmission system. SP Manweb is now required under the CUSC to submit to NGET a request for a Statement of Works when a Medium Embedded Power Station intends to connect to the Distribution System, or where (in its reasonable opinion) a Small Embedded Power Station is likely to have a significant effect on the Transmission System. Small and Medium Embedded Power Stations are defined in the CUSC. NGET may levy charges on SP Manweb for study works to assess the impact of the generator on the Transmission System. In the event of NGET applying such charges SP Manweb will recover the costs from the party seeking connection.

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We will provide you with a formal offer for the connection to our Distribution System within the prescribed timescales of 90 days as laid down in our licence. However, you should note that should it be necessary to submit a Statement of Works to NG, we will inform you accordingly and of the likely timescales involved.

For more information on NGET charges and the information required by SP Manweb to submit a Statement of Works, please refer to their website.'

## **2.6 Interactive Offers**

The principles for managing a number of connection applications that are deemed interactive will be in accordance with this statement.

These principles for interactive applications will normally be utilised for customer connection applications of 1MVA and above, connected at 11kV and above.

The Application Date for a request for connection is the date on which SP Manweb receives a complete set of data required to progress the connection application and, where applicable, receives the payment for the associated study work. This signifies the start date of the application process. The data requirements for a customer connection application are specified in the Distribution Code [and are reproduced in our standard application forms]. Relevant information is specified in our Long Term Development Statement (Licence Condition 25), available on request from the contact address set out in Section 1.7.

The Offer Date is the date on which the Company sends to the applicant the Connection Offer. The company will make a Connection Offer no later than 3 months after the Application Date, except in cases where the Authority agrees to a longer period.

In making an offer for terms of connection SP Manweb will take into account the existing and committed distribution system at the time of application. Any assets specified in an offer are not themselves regarded as part of the committed system until that offer has actually been accepted.

Subject to the provision below the applicant has 3 months from the Offer Date to accept the Connection Offer.

If at the time of making any Connection Offer there is an outstanding Connection Offer to another user, which involves or has an operational effect on the same elements of the existing and/or committed distribution network then SP Manweb shall at the time of making the second offer:

- a) inform both parties in writing that there is another offer outstanding which might affect them and that their offers are interactive; and



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- b) make the first offer and second offer conditional upon the other outstanding offer not having been accepted; and
- c) be entitled to vary the terms of either offer if the other offer is accepted first.

The Acceptance Date is the date on which SP Manweb receives from an applicant the signed Connection Agreement and, where applicable, any payment. Upon receipt of an interactive offer acceptance, SP Manweb will notify all other recipients of interactive offers that an acceptance has been received. This notification will advise them that their connection offer has been withdrawn. On the withdrawal of the connection offer, the applicant may wish to re-apply, in which case SP Manweb will issue a revised Connection Offer to the applicant.

## **2.7 Transitional Issues**

Any connection offers provided by SP Manweb and accepted in accordance with the charging rules in our Licence Condition 4 for Connections Statement April 2004 prior to 1<sup>st</sup> April 2005 will continue to be honoured.

The exception is that no adoption/handover payment will be made after December 2006 in accordance with the variation provisions of SP Manweb adoption agreement.



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**3 LICENCE CONNECTIONS PROVIDED BY SP MANWEB****3.1 Application Procedure**

Any person seeking a new or modified connection to SP Manweb's system, and who wishes SP Manweb to construct all the connection works, should apply to the address on page 6. A standard form will be provided to help applicants provide the necessary information.

Upon receipt of such information, SP Manweb will respond as soon as practicable but in any event within 3 months of receiving a duly completed application, specifying the proposed point of connection to the existing distribution system and offering terms for connection.

Where SP Manweb provides a quotation for connection to its system the quotation will normally be on a fixed price basis. Offers will be contingent upon various factors, including the obtaining of consents and/or wayleaves, and other items such as those listed within the attachment to Schedule 1. These factors, if relevant, may vary the price payable.

**3.2 Basis of Charges for Connection to the Distribution System/Principal Terms and Conditions**

Items of significant cost are identified in Schedule 1. SP Manweb will provide a detailed estimate of the cost of the connection, identifying the items of significant cost consistent with the information set out in Schedule 1. Where a detailed study is required prior to the design of the scheme, SP Manweb will agree the relevant study costs and their apportionment in advance with the person seeking the connection. Please refer to Schedule 1 for specific charges.

SP Manweb will provide detailed information for each quotation comprising of the breakdown of works associated with the connection defined in categories of voltage and type of work activities.

A statement showing circuit capacity and loading on specified parts of the system and other relevant information will be provided on request, subject to a charge dependent on the amount of work involved.

**3.3 Payment Terms**

Unless otherwise agreed, the Connection Charge is payable in full with acceptance of the quote. Large schemes, where the development is expected to take more than 12 months, may be eligible for phased payments, but all sums outstanding must be paid in advance of completion of the connection.

**3.4 Connection Offer**

It will be necessary for the person seeking the connection to accept SP Manweb's offer of connection. The offer will set down the specific terms and conditions that will apply in relation to the making of the connection and any charges due in respect of the connection. Whilst such terms and conditions will be consistent with this statement, the terms and conditions of the offer will take precedence.



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The offer of connection will normally remain open for acceptance for a 3 month period from the date of issue. (See Section 2.6 for interactive offers.) If delays in receiving the quote are encountered due to circumstances beyond the control of SP Manweb or the customer (e.g. postal strike) then it may be possible to extend this period.

SP Manweb will consider any request to extend the validity period. Requests must be accompanied by a payment of £250 to cover administrative costs.

Following acceptance of a quotation, if the proposed work is no longer required then all costs incurred by SP Manweb in commencing to provide the connection will be recovered.

### **3.5 Connection Agreements**

If applicable, the party utilising the connection will be required to enter into an appropriate Connection Agreement with SP Manweb. The Connection Agreement will specify the terms and conditions applicable for the continuance of the connection to SP Manweb's distribution system. While such terms and conditions will be consistent with this statement, the agreement will take precedence.

The connection agreement will set out SP Manweb's obligations regarding the connection, and will require the connected party to:

- Pay all and any charges due in respect of the connection as described in this statement;
- Comply with the provisions of the Distribution Code. Copies can be downloaded at [www.dcode.org.uk](http://www.dcode.org.uk).

### **3.6 Provision of information for a site to be registered by a Supplier.**

Once the customer accepts the quote SP Manweb will issue a core MPAN and LLFC to the customer. The customer will then need to appoint a Supplier, who will then appoint a meter operator. The Supplier will then register the site, which will enable energisation.



## **4 CONNECTIONS PROVIDED ON A COMPETITIVE BASIS FOR NEW HOUSING/LIGHT COMMERCIAL DEVELOPMENTS**

### **4.1 Contestable Connections**

Instead of asking SP Manweb to offer terms for connection, an applicant may choose to appoint a suitably accredited contractor to carry out the contestable work involved in the connection, see below for the type of works that are contestable. This section provides information for the connection of new housing or light commercial developments. For other types of connection please contact PowerSystems, Customer Connections, at the address given in Section 1.7.

If the applicant chooses to seek a competitive connection quote, SP Manweb remains obliged to provide an offer of terms for the non-contestable element of the full connection works. Where the intention is for SP Manweb to adopt, terms will be offered in the form of an appropriate Adoption Agreement.

Where a person chooses to appoint an accredited contractor to undertake the contestable work and services, SP Manweb will remain responsible for the non-contestable works and services.

Certain types of reinforcement and diversionary work may be carried out by suitably accredited ICPs for adoption by SP Manweb. The scope of such work is limited to reinforcement and diversionary works associated with a connection which :

- Are new works that are physically and electrically separate from the existing infrastructure.
- Do not require access to existing SP Manweb operational areas.
- Are fully funded by the single third party who is seeking the connection
- Are restricted to works to install overhead lines and underground cables at voltages not exceeding 33kV and HV/LV distribution substations.

The design of reinforcement works can require a large volume of information about the distribution network. The level and complexity of information that would need to be made available to allow the ICP to carry out such design works is likely to outweigh the benefits of including design work within the scope of contestability. The design of connection reinforcements therefore remains non-contestable.

The design of the majority of diversion projects associated with connection projects is likely to be less complex than the design of reinforcement schemes. The design of diversionary works can be contestable for overhead lines and underground cables not exceeding 33kV and HV/LV distribution substations. The dismantlement and disposal of existing assets remains non-contestable, because it would require access to the existing network.



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**4.2 Non-contestable work that must be carried out by SP Manweb**

For reasons of safety and to enable SP Manweb to comply with their duties under the Act (to develop and maintain an efficient, co-ordinated and economical system of electricity supply) certain works must remain the responsibility of SP Manweb. They are as follows: -

- Network design and planning policy.
- Equipment and materials specification.
- Equipment installation and record specification.
- Approval of connection design.
- Design and determination of point of connection.
- Design of reinforcement upstream from point of connection.
- Consents for upstream reinforcement assets (except as provided for under Section 4.1)
- Construction / installation of upstream reinforcement assets. (except as provided for under Section 4.1)
- Design of necessary diversion exceeding 33kV / removal / modification of existing DNO
- Removal/modification of existing DNO assets.
- Diversion of existing DNO assets (except as provided for under Section 4.1)
- Work within the boundary of any site owned or controlled by DNO.
- Connection to existing DNO assets.
- Live jointing (except during the live jointing trial).
- Installation inspection.
- Witnessing of commissioning tests.
- Additional works resulting from the contractor requesting the point of connection brought within the site boundary.

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**4.3 Contestable work that may be carried out by a connections service provider**

The following works may, at the option of the person seeking the connection, be carried out by an approved contractor on behalf of that person, in accordance with the terms and conditions as specified by SP Manweb: -



- Design of the connection downstream from the point of connection to the existing assets.
- Consents (wayleaves etc) for connection assets.
- Construction/installation of connection assets.
- Commissioning of connection assets.
- The design of diversionary works can be contestable for overhead lines and underground cables not exceeding 33kV and HV/LV distribution substations.
- Certain types of reinforcement and diversionary works as provided for under Section 4.1

#### **4.4 Application Procedure**

Any person seeking a new connection to SP Manweb's system, and who wishes SP Manweb to construct the non contestable elements only, should apply to the address on page 6. The customer's suitably accredited contractor can apply for this information.

The customer/contractor should provide SP Manweb with the information referred to in ESDD-02-012 Design and Planning Framework for Greenfield Low Voltage Housing Estates Installations and Associated HV/LV Distribution Substations, with regard to their requirements, and SP Manweb will base their design/quote on the information provided by the customer including loads, ground conditions etc. ESDD-02-012 can be obtained from the Customer Services section of the PowerSystems website at:

<http://www.sppowersystems.co.uk/customerservices/connections.asp>

SP Manweb will respond as soon as practicable (normally within 15-20 working days, depending upon the type of connection) with a quote. This will specify the proposed point of connection to the existing distribution system, and a cost for the non-contestable work.

Where it is appropriate to discuss customer requirements in further details, e.g. where abnormal ground conditions may increase costs, SP Manweb will approach the customer to resolve such issues.

#### **4.5 The Charge for the Non-Contestable Works**

The charge for the non-contestable works will reflect (subject to the principles set out in Sections 2 & 3) the following:-

- a) Our estimate of the costs of the work to be done by us and of the assets to be provided and installed by us for the specific benefit of the party seeking the connection;



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- b) The costs of providing lines or plant to meet any abnormal features or special supply requirements of the connection. An illustrative list of such features is contained in Schedule 1.

The work to be done and the connection charge payable will depend on the requirements of the party seeking the connection, on the condition of the distribution system at the point of connection, and on other characteristics relevant to the connection. This would also include the effective capacity and voltage level of the relevant part of the system in relation to the requirements of the party seeking the connection.

A statement showing circuit capacity and loading on specified parts of the system and other relevant information will be provided on request, subject to a charge dependent on the amount of work involved.

SP Manweb reserves the right to determine the terms applicable in cases where the normal criteria may not apply following consultation with the applicant, or where there are reasonable grounds to believe that the proposed connection would reduce the security of the system to a level below the standard required by the Act or that normally provided to other customers.

#### **4.6 Payment Terms**

The connection charge is payable in full in advance upon acceptance of the quote.

#### **4.7 Connection Offer**

It will be necessary for the person seeking the connection to accept SP Manweb's offer of connection. The offer will set down the specific terms and conditions that will apply in relation to the making of the connection and any charges due in respect of the connection. Whilst such terms and conditions will be consistent with this statement, the terms and conditions of the offer will take precedence.

The quote is valid for a 3 month period from the date of issue. If delays in receiving the quote are encountered due to circumstances beyond the control of SP Manweb or the customer (e.g. postal strike) then it may be possible to extend this period.

Following acceptance of a quotation, if the proposed work is no longer required then all costs incurred by SP Manweb in commencing to provide the connection will be recovered.

Any Connection offer is conditional on an Adoption Agreement being completed.

#### **4.8 Adoption Agreement**

This Adoption Agreement is additional to any other contract(s) that the person seeking the connection has to enter into with his own accredited contractor(s).

Whoever carries out the contestable work, the assets installed between the existing system and the new connection point(s) will be owned, operated and maintained by



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SP Manweb with effect from the adoption of the assets by SP Manweb, in accordance with the Adoption Agreement.

SP Manweb shall be entitled to use the assets installed as part of the developer's work for the purpose of offering connection to others at any time but shall not be responsible for the costs associated with any assets it does not own

Once acceptance of the Connection Offer has been received an Adoption Agreement will be issued. This is a tri-partite agreement between the Distributor, the Contractor and the Developer and sets out the obligations of each party. The Agreement includes a schedule in seven parts.

#### **4.8.1 Schedule part 1 – General conditions**

General Conditions for the Adoption of Contestable Works.

#### **4.8.2 Schedule part 2 - Standards and Specifications**

List of Distributor Standards and Specifications, which the Contestable Connection Works must comply.

This part will contain the full list of Distributor Specification with which the Contestable Works must comply. This list will include the relevant design specifications and material standards etc for the type of asset, commissioning requirements, construction and installation requirements, live working procedures, distribution safety rules etc.

#### **4.8.3 Schedule part 3 – Land Rights**

This part will detail the land rights required for the Contestable Connection Assets.

#### **4.8.4 Schedule part 4 - Specification of the Distributor Works**

This will provide details of the works to be carried out by the Distributor. It could include electrical plans and layouts but could merely be a written description of the works in simple cases. The specification would also include an indication of time scale for the completion of the work by the Distributor.

Where phased payments are to be allowed the specification must be defined in relation to each defined phase of the work.

#### **4.8.5 Schedule part 5 - Specification of the Contestable Works**

Details of the works to be carried out by the Contractor and the assets to be adopted by the Distributor are provided in this Schedule. It will include plans of the Live Working Area, if applicable, equipment lists of assets to be adopted, the electrical design, details of areas where live-working is proposed etc. The design will include any Network Enhancement to the Contestable Works agreed with the Distributor. The specification would also include an indication of time scale for the completion of the work by the Contractor – the Programme. This Part should also include the Last Date defined in Clause 1.

**4.8.6 Schedule part 6 – Payments.**

Details what payments are to be made and the timing of these payments

**4.8.7 Schedule part 7 – Contact details.**

This will detail the contact details for both the Distributor and Contractor.

**4.9 Connection Agreements**

If applicable, the party utilising the connection will be required to enter into an appropriate Connection Agreement with SP Manweb. The Connection Agreement will specify the terms and conditions applicable for the continuance of the connection to SP Manweb's distribution system. While such terms and conditions will be consistent with this statement, the agreement will take precedence.

The connection agreement will set out SP Manweb's obligations regarding the connection, and will require the connected party to:

- Pay all and any charges due in respect of the connection as described in this statement;
- Comply with the provisions of the Distribution Code. Copies can be downloaded at [www.dcode.org.uk](http://www.dcode.org.uk).

**4.10 Charges for work associated with the Contestable Element**

SP Manweb shall charge for work associated with the Contestable Assets, including:

**4.10.1 Design Approval**

If an approved contractor is carrying out the contestable works, SP Manweb will need to approve the Contestable Connection Works Design as conforming to our standard and specifications and hence suitable for adoption. SP Manweb will provide design approval or reasoned rejection within 10 working days from receipt.

**4.10.2 Inspection, Monitoring and Witness of Testing of Contractors Work**

SP Manweb will inspect contestable works in accordance with our inspection regime. Charges are dependent on the size of the development and the competence of the contractor.

**4.10.3 Contestable Land Rights**

Where the obtaining of land rights is contestable SP Manweb will charge £200 to ensure that they comply with SP Manweb's requirements. In cases where SP Manweb obtains the land rights on behalf of the Contractors then this fee will be credited against the total wayleave charge.



#### 4.10.4 Work on Contestable Assets

Where SP Manweb is requested by the Customer to undertake work on the Contestable Assets.

Full details of the charges are included in Schedule 3.



## **5 GENERAL ISSUES**

### **5.1 Unmetered connections**

Unmetered connections are generally treated as a licensed connection. However, consideration may be given if a suitably accredited contractor wishes to undertake some of the works.

### **5.2 Temporary Connections**

Customers seeking a connection for temporary supplies will be charged the full cost of the work to be done and the assets to be installed by SP Manweb for the purposes of making this connection, including the cost of eventual removal of these assets. A portion of the connection charge, in respect of assets, which are recoverable in a cost effective manner by SP Manweb at the termination of the connection, may be waived or refunded, as negotiated between the parties.

### **5.3 General Principles for Diversions**

#### **5.3.1 Non NRSWA Diversions**

Upon receiving written confirmation of a customer's requirements, a minimum design shall be produced following the SP Manweb Design Policies and satisfying any statutory or Licence requirements.

Where a network diversion is required, this is charged at full cost to the party requesting the connection and payment must accompany the acceptance form.

In cases where a Wayleave termination notice is applicable and not contested the diversion will be undertaken at the expiry of the notice period.

#### **5.3.2 NRSWA Diversions**

These diversions will be in accordance with the guidelines set out in the NRSWA.

There will be a 7.5 % discount applied to NRSWA diversionary works associated with major transport works which are not roads or bridges in nature, and which include new light and heavy railways and street-running tramways provided that 75% of an estimate of 92.5% is paid up front. There will be an 18% discount applied for major highway/road works or major bridge works, provided 75% of an estimate of 82% is paid up front. The remainder is paid at the end. If payment is not received up front no discount applies.

Upon completion of works a final reconciliation will be undertaken and if this is within £100 of the estimated cost then no refund will apply.



## 5.4 De-Energisation and Disconnection

Where a supplier or customer wishes a connection to be de-energised, a request in writing should be provided with a minimum of two working days notice (or such other period as may be specified within the appropriate agreement) to that effect. SP Manweb will arrange to de-energise the connection and, where appropriate, arrange for metering equipment to be read. No additional charge will be made for this service if carried out during normal working hours.

Temporary de-energisation (and subsequent re-energisation) resulting from the failure by a supplier or customer to comply with the terms of their Use of System or Connection Agreement as the case may be, or carried out at the request of a supplier or customer will be at the expense of that supplier or customer.

Temporary de-energisation (and re-energisation) of the premises at the request of the customer or supplier, will be carried out at the expense of the customer.

Where it becomes necessary to disconnect a customer, that is to have SP Manweb's equipment removed from site, any payments outstanding in first providing that connection will become due forthwith.

If the customer or supplier requires the connection point to be disconnected, this should be requested in writing. On receipt of such a request SP Manweb will take all practical steps to remove the equipment in accordance with the customer's reasonable requirements. Normally low voltage service termination equipment will be removed within 5 working days but up to three months notice may be required to remove high voltage substation plant. In the case of EHV supplies SP Manweb should be consulted at an early stage and a programme for the removal of equipment will be subject to individual assessment.

On termination of a Connection Agreement, SP Manweb retains the right to remove its equipment and the customer will pay the cost of such removal. Assets that are not cost effective to recover (e.g. buried cables) will normally be made safe and left on site, but if the customer requires SP Manweb to remove them, the cost of removal will be payable by the customer. All such equipment will remain the property of SP Manweb unless otherwise agreed in writing with SP Manweb.



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**6. DISPUTES****Dispute and Determination Procedure**

Where the customer is unhappy with the terms or charges offered by SP Manweb the customer should in the first instance approach the company. If agreement with the company cannot be reached within a reasonable time, the customer may approach energywatch (the Gas and Electricity Consumer Council). They are able to investigate consumer complaints and disputes.

Licensed charges for distributor works can be determined and should energywatch be unable to resolve a dispute, which is determinable, either party may request settlement by the Gas and Electricity Markets Authority. energywatch will forward the case to the Authority.

PowerSystems' customer service contact details:

PowerSystems  
Customer Connections  
PO Box 8730  
Bellshill  
ML4 3YE

The customer may also wish to contact the Licensee at:

Regulation Director  
SP Transmission & Distribution  
New Alderston House  
Strathclyde Business Park  
Bellshill ML4 3FF

Tel: 01698 413475  
Fax: 01698 413056

energywatch contact details are:

energywatch Central  
Civic house  
156 Great Charles Street  
Birmingham  
B3 3HN

Tel. No. 08459 060708

Email: [enquiries@energywatch.org.uk](mailto:enquiries@energywatch.org.uk)

**SCHEDULE 1 – INDICATIVE CHARGES FOR BOTH LICENSED AND CONTESTABLE WORKS**

Charges and costs shown in this schedule are for **guidance only** and are current at the time of publication. They may be subject to change without notice except as provided by agreement.

<b>For Connection at LV</b>	<b>ILLUSTRATIVE RANGE OR AVERAGE COST BY ITEM OR CLASS OF ITEM</b>
Service line and termination up to 5m	From £743 plus £21 per metre To £2,234 plus £91 per metre
Three phase service line and termination up to 5m	From £827 plus £25 per metre To £2,318 plus £95 per metre
Extension and/or reinforcement of LV mains up to 5m	From £813 plus £35 per metre To £1,255 plus £128 per metre
Extension and/or reinforcement of HV mains up to 5m	From £28,541 per km for rural To £103,496 per km for urban
New HV/LV substation	From £3,769 per km for rural To £25,240 per km for urban
Transformer change at existing HV/LV substation	From £2,580 per km for rural To £6,244 per km for urban

<b>For Connection at HV</b>	<b>ILLUSTRATIVE RANGE OR AVERAGE COST BY ITEM OR CLASS OF ITEM</b>
Extension and/or reinforcement of HV mains	From £28,500 per km for rural To £90,922 per km for urban
Extension and/or reinforcement of EHV mains	From £34,200 per km for rural To £140,975 per km for urban
Switchgear on customer's premises	From £13,667
New EHV/HV substation	From £385,000 for rural To £800,000 for urban
Transformer change at existing EHV/HV substation	From £190,000 (change 10 MVA to 24 MVA)



All costs quoted are: -

- i) Current at - 1<sup>st</sup> December 2006
- ii) Inclusive of SP Manweb's on-costed prices of equipment, labour, materials installation and transport.
- iii) Inclusive of the cost of the design and specification and project management of the connection scheme requirements but exclude any feasibility studies.
- iv) Exclusive of VAT.
- v) Exclusive of metering costs (the provision of metering services is normally the responsibility of the Supplier).
- vi) Exclusive of substation building costs.
- vii) Exclusive of costs relating to the obtaining of legal rights, wayleaves, consents and all other necessary permissions.
- viii) Assuming no abnormal excavation costs (and where possible excavation has been assumed to be by machine).

### **Charges for connections of 11kV and above.**

#### **Connection Applications**

An application fee, which acts as an advance payment of Engineering Charges and other expenses involved in preparing an offer of terms, is payable to SP Manweb at the time of each application. The amount of the fee is dependent on both the electrical capacity and the highest voltage at the Point of Common Coupling and will normally be in accordance with the table below. The Point of Common Coupling is the point on SP Manweb's distribution system that is electrically nearest to the proposed new or modified connection at which other customers' loads are, or may be, connected.

Highest Voltage at Point of Common Coupling (kV)	Capacity (MW)	Application Fees
11	Any	£5,000
33	up to 30	£7,500
33	>30	£10,000
132	≤100	£20,000
132	>100	£30,000

All fees are subject to the addition of VAT.

SP Manweb reserves the right to vary these amounts, depending upon the size and complexity of the scheme and the amount of work involved.



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If for any reason additional offers of terms are required for the same scheme, SP Manweb will discount the additional offers by up to 50%, provided there are no significant differences in the parameters. If there are significant differences, no discount to the application fee will be applicable

The aforementioned fees will be reduced by up to 50% for modifications to existing connections.

**Attachment to Schedule 1 - Typical Factors Influencing Costs and Charges**

1. Standards governing the system.
2. Length of cable/line required from existing system.
3. Size of customer demand in relation to available capacity of existing system, including the age of the assets and the condition of the system.
4. Whether any extension or reinforcement of the existing system is by underground cable or overhead lines.
5. Type of ground requiring excavation; type and extent of reinstatement necessary (including New Road and Street Works Act requirements); need for road crossings.
6. Availability of the necessary legal rights, wayleaves, easements and/or permissions for the cables, lines and/or any other item of plant or equipment.
7. Availability of suitable substation sites including any necessary planning consents and/or permissions.
8. Necessity of working outside normal working hours.

**Illustrative List of abnormal services that may be reflected within the Connection Charge**

1. Service termination where the customer fails to provide and/or install ducts and/or service termination position to facilitate the installation of services into the premises.
2. Progression of work required other than in an orderly fashion in accordance with normal engineering policies and practices thus imposing additional costs.
3. Transformer/substation sites not provided to SP Manweb in suitable locations at nominal prices or rents, taking account of both cable access and access by personnel.
4. Multiple occupancy premises where the developer fails to provide all necessary civil work including ducts, access ways, chases and covers, etc.
5. Loads with abnormal characteristics that affect the security and standard of service on the system, for example arc welders and large motors.

**SCHEDULE 2 – INDICATIVE CHARGES FOR NON CONTESTABLE WORK**

Charges and costs shown in this schedule are for guidance only and are current at the time of publication. They may be subject to change without notice except as provided by agreement.

**Work on the Contestable Assets**

Indicative charges for typical LV connections, made on site with plastic cable, include where SP Manweb is requested to undertake work on the Contestable Asset the following charges apply;

ITEM	NORMAL TIME		PRIME TIME	
ITEM	Normal Rate	Subsequent jointing work	Prime time price	Prime time subsequent jointing work
Single service joint	£392.00	£294.00	£569.00	£427.00
Double service joint	£519.00	£389.25	£750.00	£562.50
Treble service joint	£550.00	£412.50	£781.00	£585.75
Quad service joint	£582.00	£436.50	£813..00	£609.75
Straight Joint	£395.00	£296.25	£572.00	£429.00
Breeches Joint	£520.00	£390.00	£751.00	£563.25
Pot end	£253.00	£189.75	£369.00	£276.75
Make off 5 way take off chamber	£1,066.00		£1,528..00	
Make off 6 way take off chamber	£1081.00		£1,543.00	
Make off 4 way take off chamber	£1028.00		£1,490.00	
Make off 2 way take off chamber	£514.00		£745.00	
Make off N2 Pillar	£514.00		£745.00	
Abortive visit jointing team per hour	£129.00			
Abortive visit inspection & monitoring	£66.00			
Site visit requested by 3rd party	£66.00			

All costs quoted are: -

- a) Current at 1<sup>st</sup> December 2006.
- b) Inclusive of SP Manweb's on-costed prices of equipment, labour, materials, installation & transport.
- c) Exclusive of VAT.
- d) Exclusive of all trenching, excavation and reinstatement costs.



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- e) All other jointing and services will be assessed individually.
- f) Where two or more joints are undertaken in the same site visit then the highest fixed price joint will be charged at full price and subsequent joints at the discounted rate.

**SCHEDULE 3 - INDICATIVE CHARGES FOR APPROVING THE CONTESTABLE WORK**

The illustrative costs shown below relate to those non-contestable services that SP Manweb must provide, in all cases, as part of any new or increased connection. These non-contestable services are in addition to any non-contestable work that SP Manweb must undertake, such as reinforcement of the existing system.

**Approval of Design and Specification**

SP Manweb reserves the right to determine the specific circumstances under which design of system extensions, for new or increased connections from the existing distribution system, can be undertaken by approved third parties. In all instances the design is subject to SP Manweb approval.

Indicative charges for typical connections are given below: -

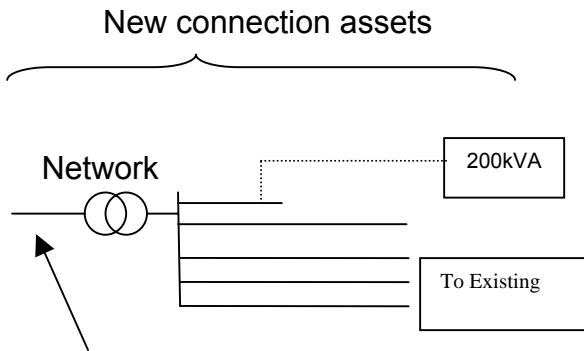
Category	Charge
Design Approval – Domestic Connections	
Up to 20 plots	£250
21 to 100 plots	£350
101 to 200 plots	£400
Over 201 plots	£500
Design Approval – Commercial/Industrial Connections at LV	
Under 45kVA	£250
46kVA to 150kVA	£250
151kVA to 500kVA	£400
Over 500kVA, abnormal loads HV connections	£750
Primary substation	£4,200
Inspection & Monitoring	
Level 1	
1-100	£30 per plot
101 – 200	£20 per plot
201+	£5000 per site
Level 2	£600 per site
Level 3	£400 per site
One off commercial industrial connections HV/LV	
Level 1	£400
Level 2	£200
Level 3	£100
Abortive visit	£25
Site visit requested by 3 <sup>rd</sup> party	£65
Primary substation works	£7,100
Witness of testing	
Standard X Type Substation	£700
Standard Y Type Substation	£350
Primary Substation	£9,400
Pole Mounted Transformer	£170



**Notes:**

- a) These charges are for **guidance only** and may be varied to reflect the individual circumstances of a given connection.
- b) Connections made at a voltage above 415V or those with generation facility or involving work at 33 kV or 132 kV will be individually assessed.
- c) Costs associated with the obtaining of legal rights, wayleaves, consents or permissions and also those costs pertaining to supervision and commissioning will be individually assessed upon each application.
- d) It is SP Manweb's preference to only provide a design approval to the person requesting the connection(s) i.e. the main developer or appointed agent. Subsequent requests will be charged on the above basis.
- e) SP Manweb reserves the right to charge additional costs or fees for redesigns.

Where SP Manweb is requested to provide system information, the charges will be individually assessed reflecting the expenses that are to be incurred.

**SCHEDULE 4 APPLICATION OF THE REINFORCEMENT APPORTIONMENT RULES****4.1 COST APPORTIONMENT FACTOR****EXAMPLE 1** – Single customer, large LV network supply

Network substation - 500kVA t/x fully loaded

New customer requires 200kVA

New network substation required developer provided.

Cost of connection is £60,000

$$\text{Cost apportionment factor} = \frac{\text{Required capacity} \times 100 \text{ (maximum 100\%)}}{\text{New Network Capacity}}$$

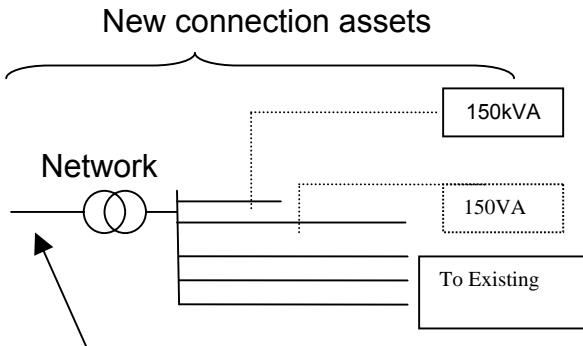
$$\text{Security caf} = 200/500 = 40\%$$

$$\text{Reinforcement apportionment is 40\% of £60,000} = \text{£24,000.}$$

**Notes:**

New connection assets are contestable, except final joint(s)

Connection Charges Regulations may apply if another connects on the connection assets provided for by the original customer

**EXAMPLE 2 – Multiple customers for large LV supplies**

Network substation - 500kVA t/x fully loaded

Two new customers each requiring 150kVA

New network substation required developer provided.

Cost of connection is £60,000

**Cost apportionment factor =  $\frac{\text{Required capacity} \times 100 \text{ (maximum 100\%)}}{\text{New Network Capacity}}$**

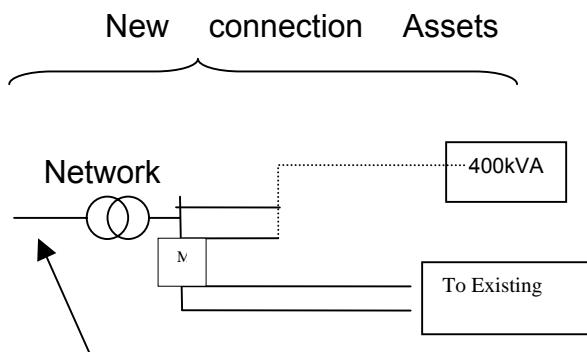
Security caf = 300/500 = 60%

Reinforcement apportionment is 60% of £60,000 = £36,000 between both customers @ £18,000 ea.

**Notes:**

New connection assets are contestable, except final joint(s)

Connection Charges Regulations may apply if another connects to the connection assets provided for by the original customer

**EXAMPLE 3 - Single customer large LV substation supply**

Network substation - 500kVA t/x fully loaded

New customer requires 400kVA

New network substation required developer provided.

Cost of connection is £60,000

**Cost apportionment factor = Required capacity x 100 ( maximum 100%)**  
**New Network Capacity**

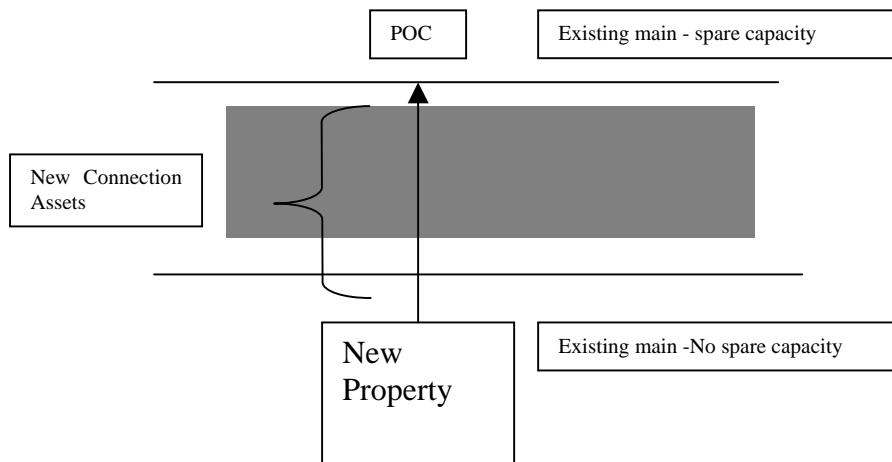
Security caf = 400/500 = 80%

Reinforcement apportionment is 80% of £60,000 = £48,000.

**Notes:**

New connection assets are contestable, except final joint(s)

Connection Charges Regulations may apply if another connects to the connection assets provided for by the original customer

**EXAMPLE 4 – Single customer LV network supply**

New domestic connection required

Main on same side of road is fully loaded

Main on opposite side of road has spare capacity

Cost of connection is £1,000

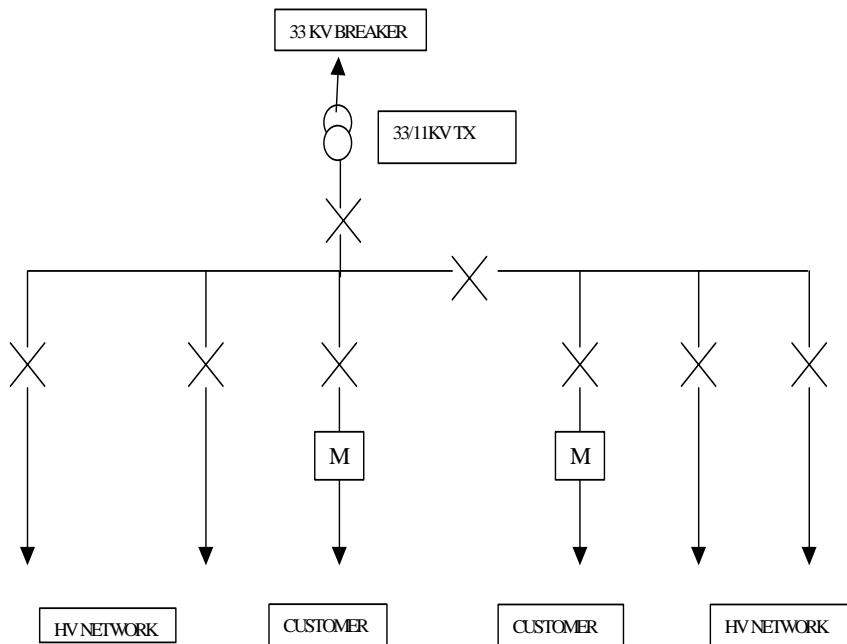
Alternative scheme to off-load capacity from main on same side of road more expensive @ £1200 than road crossing option.

Security and fault level caf rules don't apply as all assets are provided for connection

**Notes:**

New connection assets are contestable, except final joint

Connection Charges Regulations may apply if another connects to the connection assets provided for by the original customer

**EXAMPLE 5 – Single customer EHV substation supply**

Customer provided Primary Substation required.

Cost of connection is £1,000,000

$$\text{Cost apportionment factor} = \frac{\text{Required capacity} \times 100 \text{ ( maximum 100\%)}}{\text{New Network Capacity}}$$

$$\text{Security CAF} = \frac{4.5 \times 100}{7.5} = 60\%$$

$$\text{Cost apportionment factor} = \frac{3 \times \text{Fault Level contribution from Connection} \times 100}{\text{New Equipment Fault Level Capacity}}$$

$$\text{Fault Level CAF} = \frac{3 \times 75 (225) \times 100}{250} = 90\%$$

Reinforcement apportionment is 90% of £1,000,000 = £900,000

The customer will be allocated the highest figure from the above calculations.

**Notes:**



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New connection assets are contestable, except final joint(s)

Connection Charges Regulations may apply if another connects to the connection assets provided for by the original customer.

#### **4.2 APPLICATION REINFORCEMENT RULES**

**EXAMPLE 1 –** Adopted Primary substation 33kV point of connection.

A 33kV Primary substation is required for new retail park with a capacity of 7MVA.

POC requested by ICP ( Independent Connection Provider).

Primary substation and on site network to be constructed by ICP and adopted by SP Manweb, therefore fully funded by the customer.

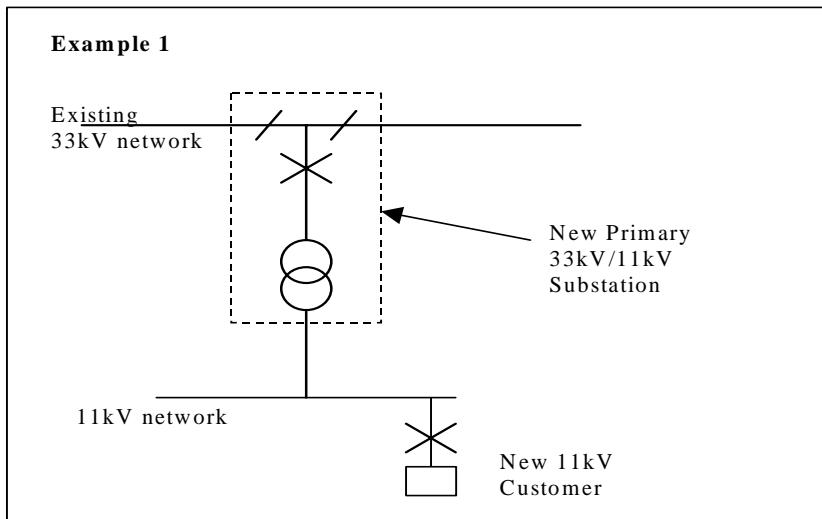
The Non Contestable connection charge is £90,000.

The existing network has been reinforced by the addition of a new 132kV Grid Transformer which provided 60MVA of capacity. The cost is recoverable within a five year period from new/increased connections connected at 33kV and above to the existing SP Manweb network on a £/kVA basis, subject to the one voltage rule.

Upstream reinforcement is calculated to be £65/kVA therefore reinforcement cost is 7000 x £65 = £455,000.

The New Primary substation is interconnected at 11kV to comply with P2/6.

Connection Cost	£90,000
Past Reinforcement	£455,000
Total Customer Contribution is	£545,000

**EXAMPLE 2 – Upgrade in supply**

Customer requests increase in supply from 1MVA to 1.5MVA. Existing HV Network has sufficient capacity for increase. Therefore no works are required.

Existing 33kV network has been reinforced by the addition of a new 132/33kV Grid Transformer which cost is recoverable from new/increased connections within a 5 year period, connected at 11kV and above to the existing SP Manweb network on a £/kVA subject to the one voltage rule.

Upstream reinforcement is calculated to be £70/kVA therefore past reinforcement cost is  $500 \times £70 = £35,000$ . 500kVA being the difference between the existing and increased capacity.

Customer Contribution is £35,000.

**EXAMPLE 3 – Licensed 300kVA connection.**

Customer requests a Licensed connection for a new LV supply of 300kVA. A new 500kVA secondary substation is required.

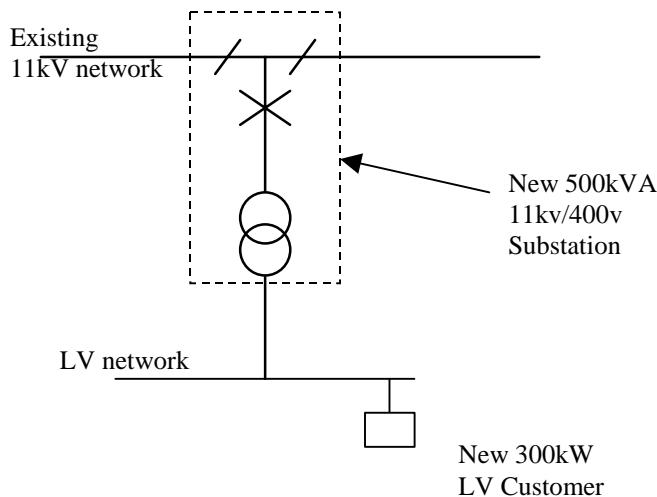
Total Connection Cost is £50,000.

The LV network is in need of reinforcement therefore LV interconnection is required to utilise spare capacity in substation. The customer only contributes his connection capacity of 300kVA with SP contributing for 200kVA plus additional LV interconnection cost £2000.



Connection Cost is therefore:

Substation Installation	£50,000
Additional work by SP	£2000
Apportioned 300/200	£30,000 Customer/£20,000 SP
Customer Contribution	£30,000
SP Contribution	£22,000

**Example 3****EXAMPLE 4 - Adopted Housing site 400kVA**

New substation required for new housing site requiring a capacity of 400kVA. POC requested by ICP (Independent Connection Provider). Substation and on site network to be constructed by ICP and adopted by SP Manweb.

Non Contestable connection cost is £10,000.

Existing 11kV network has also been reinforced by the addition of a new 33/11kV Primary substation. The cost is recoverable from new/increased connections within a 5 year period, connected at LV and above to the existing SP Manweb network subject to the one voltage rule.



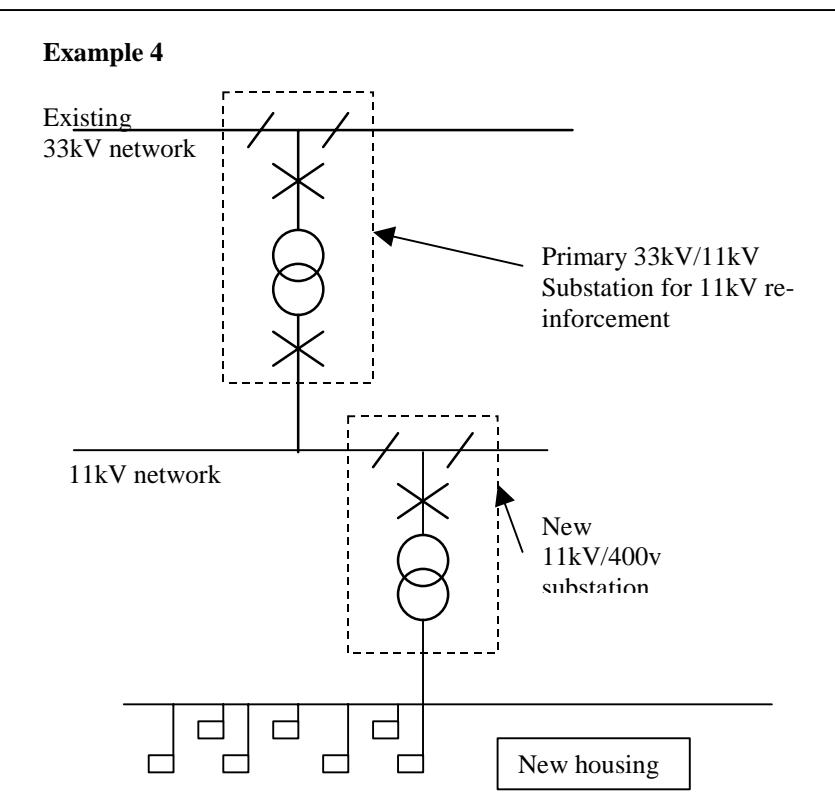
Upstream reinforcement is calculated to be £150/kVA therefore reinforcement cost is 400 x £150 = £60,000.

Connection Cost is therefore:

Non Contestable cost £10,000

Past 11kV Reinforcement £60,000

Customer Contribution £70,000



**SCHEDULE 5 GLOSSARY**

In the statement the following expressions shall have the meanings set out below:

**“Act”** the Electricity Act 1989 as amended;

**“Authorised”** applies to an employee of an approved installer, being recognised by SP Manweb to have the necessary knowledge and skill to carry out, with the necessary safety and quality, certain tasks associated with the installation of new connections. **“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.

**“Connection”** the installation of the Distributor’s equipment at a Plot in such a way that subject to energisation the Customer may receive a supply of electricity over the Distributor’s System and “Connections” shall be construed accordingly;

**“Connection Agreement”** the agreement for connection of the Customer’s Electrical Installation at a Plot to the Distributor’s System;

**“Consents”** which we need in accordance with various statutes before we can build or modify an overhead line. Examples are planning permission and approval by the Department of Trade and Industry.

**“CUSC”** Means the Connection and Use of System Code governing connection to and use of NGC’s transmission system.

**“de-energise”** an action of opening switches or removing fuses, in order to prevent electricity flowing from our distribution network to your equipment at your premises.

**“disconnect”** our action intended to permanently break the connection between our system and your equipment, possibly including the removal of our equipment from your premises.

**“Distribution Code”** 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 Dsitrbiution/SP Manweb pursuant to section 6 (1) of the Act.

**“EHV”** An EHV premise is defined as a site connected to a distribution system at a voltage higher than 22kv or at a substation with a primary voltage of 66kv or above,

**“energised” or “energisation”** the taking of any step whereby an electrical current can flow through a Connection Point;

**“energywatch”** the organisation of that name having its head office at 4<sup>th</sup> Floor, Artillery House, Artillery Row, London SW1P 1RT;



**“LLFC”** has the meaning given to that term in the Settlement Agreement

**“LV”** Low Voltage 230 volts plus 10% or minus 6% measured between the neutral conductor and any phase conductor, or 400 plus 10% or minus 6% measured between any two phase conductors.

**“MPAN”** Meter Point Administration Number also known as the Supply Number.

**“Network”** The whole of our interconnected distribution equipment, including cables, overhead lines and substations, which we operate in accordance with our licence.

**“NRSWA”** New Roads and Street Works Act 1991

**“Offer Letter”** the letter which constitutes the offer from the Distributor to the Customer to provide the Connection(s);

**“Reinforcement”** Any alteration to our existing network, designed to enable the system to distribute an increased amount of electricity.

**“Use of System charging methodology”** The principles on which and the methods by which, for the purpose of achieving the objectives referred to in paragraph 3 of standard condition 4 (Use of System Charging Methodology) Use of System Charges are determined.