



*Promoting choice and
value for all customers*

Your Ref:
Our Ref:
Direct Dial: 020 7901 7050
Email: robert.hull@ofgem.gov.uk

13 April 2006

Dear Colleague,

Consultation on modifications to Statements of the Basis for Transmission Owner Charges

Scottish Hydro-Electric Transmission Ltd (SHETL) and Scottish Power Transmission Ltd (SP) are the Transmission Owners (TO) in the north and the south of Scotland, respectively. In this capacity they provide services to National Grid Electricity Transmission (NGET), the GB system operator, who in turn provides transmission services to users of the GB electricity transmission network.

Under their Electricity Transmission Licences, SHETL and SP are required to have a statement, approved by the Authority, setting out the basis upon which they will charge NGET for the services provided. The services comprise:

- Transmission owner services
- Connections to the licensees' transmission system, and
- Outage charges

Pursuant to Special Condition J2 (5) of SHETL and SP's Electricity Transmission Licences SHETL and SP shall, at least once in every year make any necessary revisions to these statements in order that the information set out in the statements shall continue to be accurate in all material respects.

We recently requested that SHETL and SP provide updated versions of the Statement of the Basis for Transmission Owner Charges. SHETL and SP have subsequently provided us with draft statements for approval. These are attached to this letter as appendices.

In previous years, we have sought views from third parties on modifications to these statements. Following this precedent we now seek views on the proposed modifications to SHETL's and SP's Statements of the Basis for Transmission Owner Charges. In particular views are sought on whether



- the statements provide sufficient clarity on the basis for transmission owner charges to NGET
- the statements continue to be accurate in all material respects

Views are invited by **Friday 12 May 2006**. Where possible, responses should be sent electronically to

Michael Dodd
Transmission Policy
Ofgem
70 West Regent Street
Glasgow
G2 2QZ
Email michael.dodd@ofgem.gov.uk

All responses will be held electronically by Ofgem. They will normally be published on the Ofgem website unless they are clearly marked confidential. Wherever possible, consultees should put confidential material in appendices to responses. Ofgem prefers to receive responses electronically so that they may be easily placed on its website.

Please contact Michael Dodd (0141 331 6008) if you wish to discuss or query the issues raised in this open letter further.

Yours sincerely,



Robert Hull
Director, Transmission



SP Transmission & Distribution

**STATEMENT OF THE BASIS OF
TRANSMISSION OWNER CHARGES**

CHARGES APPLICABLE FROM 1 APRIL 2006

**THIS DRAFT STATEMENT HAS BEEN
SUBMITTED FOR APPROVAL TO THE GAS AND
ELECTRICITY MARKETS AUTHORITY**



CONTENTS

	Page
1 INTRODUCTION.....	1
1.1 LICENCE OBLIGATIONS	1
1.2 COST ALLOCATION.....	1
1.3 NOTIFICATION OF CHARGES TO NGET.....	2
2 GENERAL SYSTEM CHARGES	3
3 SITE SPECIFIC CHARGES	4
3.1 PRE-VESTING CONNECTIONS CONNECTION ASSETS	4
3.2 POST-VESTING CONNECTION CONNECTION ASSETS.....	4
3.3 PAYMENT OPTIONS.....	4
3.3.1 <i>Option 1 - Annual Charges, Out-turn</i>	4
3.3.2 <i>Option 2 -Annual Charges, Firm price</i>	5
3.3.3 <i>Option 3 - Capital Contribution, Out-turn Cost</i>	5
3.3.4 <i>Option 4 - Capital Contribution, Firm price</i>	5
3.4 EARLY TERMINATION OF COMMISSIONED CONNECTIONS	6
3.5 RE-USE OF CONNECTION ASSETS	6
3.6 EARLY REPLACEMENT.....	7
3.7 TRANSMISSION OPERATION AND MAINTENANCE COSTS	7
3.8 EARLY TERMINATION OF TRANSMISSION RE-INFORCEMENT WORKS.....	7
4 OTHER CHARGES.....	8
4.1 APPLICATION FEES	8
4.1.1 <i>Fixed fees</i>	8
4.1.2 <i>Variable Price Application fees</i>	9
4.1.3 <i>Changes to Planning Assumptions</i>	9
4.2 FEASIBILITY STUDIES	9
4.3 ONE-OFF COSTS AND ADDITIONAL WORKS REQUESTED.....	9
4.4 CHARGES FOR LAND PURCHASE, CONSENTS AND WAYLEAVES	9
4.5 OUTAGES REARRANGED AT THE GBSO'S REQUEST.....	10
5 INDICATIVE CHARGES.....	10
APPENDIX A – FIXED-PRICE APPLICATION FEES FOR NEW CONNECTIONS.....	11
APPENDIX B – FIXED-PRICE APPLICATION FEES FOR MODIFICATIONS TO EXISTING CONNECTIONS.....	12
APPENDIX C SPT ENGINEERING RATES.....	14
APPENDIX D INDICATIVE CONNECTION CHARGES.....	15
GLOSSARY OF TERMS.....	15



1 INTRODUCTION

1.1 Licence obligations

SP Transmission Limited (SPT) is required under its transmission licence, Special Condition J2, to prepare this statement which sets out the basis on which charges will be made to NGET as GB System Operator (GBSO) for transmission services as specified in the System Operator / Transmission Owner Code (STC). These services include the planning, development, construction, maintenance and operation of new connections to the licensee's transmission system.

In respect of connections to the licensee's transmission system, the licensee is obliged to include in the statement: -

- (a) a schedule listing those items (including the carrying out of works and the provision and installation of electric lines or electrical plant or meters) of significant cost liable to be required for the purpose of connection (at entry or exit points) to the licensee's transmission system for which site specific charges may be made or levied and including (where practicable) indicative charges for each such item and (in other cases) an explanation of the methods by which and the principles on which such charges will be calculated;
- (b) the methods by which and the principles on which site specific charges will be made in circumstances where the electric lines or electrical plant to be installed are (at the licensee's discretion) of greater size or capacity than that required;
- (c) the methods by which and the principles on which any charges (including any capitalised charge) will be made for maintenance, replacement and repair required of electric lines, electrical plant or meters provided and installed for making a connection to the licensee's transmission system;
- (d) the methods by which and the principles on which any charges will be made for disconnection from the licensee's transmission system and the removal of electrical plant, electric lines and ancillary meters following disconnection; and
- (e) such other matters as shall be specified in directions issued by the Authority from time to time for the purpose of this condition.

1.2 Cost Allocation

Transmission charges reflect the costs of connection assets employed, net of any capital contributions. This includes a gross asset value (GAV), a depreciation charge, a return on the net asset value (NAV) and the cost of operating and maintaining the connection assets.

Hence, connection assets that have been financed by NGET through capital contributions will be exempt from the depreciation and rate of return elements of the charges, but will be subject to charges for ongoing operation and maintenance. Where meter connection assets or services are provided by SPT, the associated costs are recovered in connection charges.



Operation and maintenance charges include:

- a proportion of the cost of running the transmission business;
- standby and out of hours service;
- payment of local authority charges associated with the connection site (if owned by SPT); and
- total site care covering site safety, security and environmental protection and liaison with local authorities, wayleave grantors and members of the public.

1.3 Notification of Charges to NGET

SP Transmission, under Special Condition J1 of its licence, will notify NGET of its best estimates for the amounts TSP_t and $TSPN_t$ in respect of year t by 1st November of year $t-1$, where:

TSP_t means an amount no more than $TR_t - \text{Bit}$ (Maximum allowable revenue less BETTA implementation costs) and

$TSPN_t$ means an amount no more than Bit (BETTA implementation costs).

Other charging data will be provided to NGET in accordance with the STC and relevant STC procedures.



2 **GENERAL SYSTEM CHARGES**

SPT's Transmission Price Control, set by the Authority, recovers the following costs:

- (a) Capital costs for providing, replacing and/or refurbishing SPT's Infrastructure assets
- (b) Capital costs for replacing and/or refurbishing SPT's pre-Vesting Connection Assets, and
- (c) Operating and maintenance costs associated with all SPT's assets

The Total Allowed Revenue as set by the Price Control in year t , is the term TR_t in SPT's licence and is referred to as TO General System Charges in the *STC*.

One twelfth of the total allowed revenue TR_t will be billed to NGET each month.



3 SITE SPECIFIC CHARGES

3.1 Pre-Vesting Connection Assets and

Connection capital charges for pre-Vesting connection assets will be recovered through General System Charges and are not addressed in this document.

3.2 Post-Vesting connection assets

Post-Vesting connection assets are excluded from SPT's Price Control and SPT's capital costs associated with them are referred to as 'Site specific'. In accordance with the STC, the capital costs of providing new connections or modifying existing connections to SPT's transmission system, and the operating and maintenance costs of these connection assets will be recovered from NGET.

3.3 Payment Options ¹

The capital cost of constructing or modifying connection assets, including overheads can be paid in one of four ways:

3.3.1 Option 1 Annual Charges, Out-turn Price ²

For connections where NGET elects to pay all or part of the actual installation costs by Annual Charges, over a period of up to 40 years, the annual charges are calculated as follows:

Gross Asset Value (GAV*) = Connection Price

Annual Charge = Depreciation charge + Return charge

$$\text{Depreciation Charge} = \frac{\text{GAV}^*_{\text{adj}}}{40}$$

Return Charge = Net Asset Value (NAV**) x Return***

Capital Charge (CC) = One-off payment by NGET to SPT

$$\text{Adjusted GAV (GAV}^*_{\text{adj}}) = \text{GAV}^* - \text{CC}^*$$

Asset Age = Age at 1st April each year, rounded up to the nearest year

$$\text{Net Asset Value (NAV}^*) = \text{GAV}^*_{\text{adj}} \times \frac{39.5 - \text{Age}}{40}$$

¹ The main change to this statement is making the calculations of the 4 payment options more explicit and maximise returns.

² This is to remove any doubt that the calculation of Annual Charges involves indexation of the GAV.



* Indexed annually by RPI_n, where $RPI_n = \frac{\text{May to October average RPI in year } n-1}{\text{May to October average RPI in year } n-2}$

** NAV is based on the revalued GAV*

*** Return = a reasonable rate of return (normally 8.9%, but may be higher in line with the risk profile).

The depreciation period for post-Vesting connection assets may, by mutual agreement, be less than 40 but not more than 40 years.

One off-works (i.e. works requested in excess of the minimum scheme) will be paid as a one-off capital charge, rather than annual charges. Therefore only sole-use connection assets may be paid for by annual charges.

3.3.2 Option 2 Annual Charges, Firm Price

The connection price is based on a fixed-price estimate of the costs of the connection works, and is calculated as in Option 1, except that the firm price may include a risk margin to allow for possible variances above the estimate, which might occur for any reason. Due to the current long lead times for new connections (eg the transmission outage programme, which can be as much as 5 years, and the expected time to obtain planning consents), it may not be feasible for the Company to offer firm prices.

3.3.3 Option 3 Capital Contribution, Out-turn Price

For connections where NGET elects to pay for the installation costs in full, NGET will make milestone payments, based on fair and reasonable estimate of the value of work to be done at each stage, with the final payment made, following a reconciliation of the actual costs incurred in completing the connection assets and paid in advance of commissioning the connection.

The Capital Contribution is calculated as follows:

Gross Asset Value (GAV) = Capital Contribution

Capital Contribution = Construction Costs* + Margin**.

* including overheads

** A reasonable margin (normally 8.9% of the Construction Costs)

3.3.4 Option 4 Capital Contribution, Firm Price

Full capital contribution based on a fixed-price estimate of the costs of the connection works. The connection price will be calculated as in Option 3 except that the Construction Costs will include a risk margin to allow for increases, which might occur for any reason.

Should NGET choose this option, milestone payments will be paid at the stages agreed in the construction agreement.



SPT will consider on a case-by-case basis a combination of two of the above options.

Deleted: ¶

3.4 Early Termination of commissioned connections

Costs of new connections will be fully recoverable from NGET in all circumstances, including the liability to pay a Termination Amount where a Connection Agreement is terminated by NGET.

If a connection charge is paid by annual charges and NGET gives notice of termination of the Connection Agreement prior to the expiry of the economic life of the connection assets, SPT will require NGET to pay a Termination Amount. This will recover the Net Asset Value (NAV) of the connection assets plus the cost of removing the connection assets if required.

The termination charge will be calculated as follows:

NGET will be liable to pay an amount equal to the NAV of such connection assets as at the end of the financial year in which termination or modification occurs, plus:

- The reasonable costs of removing such connection assets. These costs being inclusive of the costs of making good the condition of the connection site; and
- If a connection asset is terminated before the end of a financial year, the connection charges for the full year remains payable.

The calculation of termination amounts for financial year n is as follows:

Termination Charge_n = C_n + NAV + R where:

C_n = Outstanding Connection Charge for year n

NAV = NAV of connection assets as at 31 March of financial year n

R = Reasonable costs of removal of redundant connection assets and making good. Reasonable costs of removal for terminated connection assets and making good the condition of the site include among others:

- modifications to protection systems should a circuit breaker be decommissioned as a result of a User leaving a site
- civil engineering works associated with restoring ground levels as a result of removing connection assets. ~~The commercial arrangements shall be covered in detail in specific TO Construction Offers.~~

3.5 Re-Use of Connection Assets after early termination

Should the connection assets be re-used, such that SPT receives connection charges as a result of their use, part of the termination charge will be refunded to NGET. The amount refunded will depend on the proportional extent to which the original income stream is



replaced. The refund will be based on the NAV at the time the asset is brought back into use, less the cost of maintaining and storing the asset whilst out of service.

Should a period of more than 5 years elapse before re-use of the terminated connection assets, a partial refund of the termination payment will be made provided clear financial evidence of payment of such termination amount is provided by NGET³.

3.6 Early Replacement

If SPT considers that connection assets require to be replaced prior to the end of their normal economic lifetime, the replacement costs will be borne by SPT within the remaining economic life of the original connection assets. On expiry of the expected lifetime of the original connection assets, the connection charge will be recalculated taking account of the NAV of the replacement connection assets, together with the normal provision for depreciation.

3.7 Transmission Operation and Maintenance Costs

Operating and maintenance charges will be collected through General System Charges and are not addressed in this statement. ~~For connections, these charges are calculated on 2% of the connection asset GAV.~~

3.8 Early Termination of Transmission Reinforcement Works

When a TO Construction Agreement for a connection is terminated by NGET prior to completion of the works then, in addition to the costs incurred at the time of termination for connection assets, NGET must also pay, to SPT, the costs incurred at the time of termination for any transmission works which were required as a direct consequence of the NGET Construction Application.

³ SPT currently has a 5-year limit on refunding termination payments upon re-use of terminated assets, while NGET have no time limit. Should a new user take the connection after 5 years NGET would have to refund the original user, while SPT would not. This clause removes the 5-year limit, however NGET must provide clear financial evidence of the termination payment, as the re-use could be 15 years later.



4 OTHER CHARGES

4.1 Application Fees

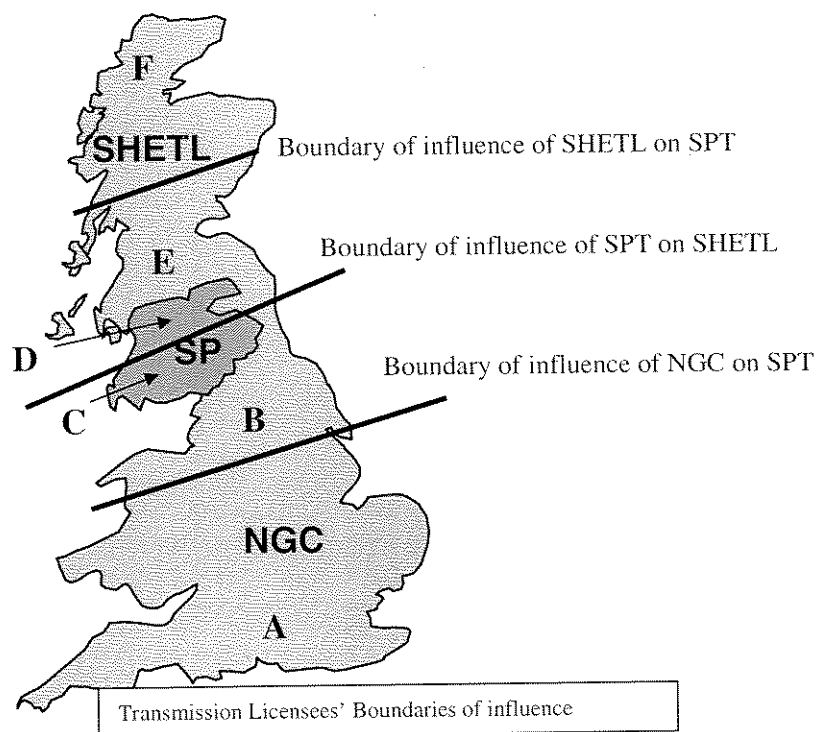
If, as a consequence of a User Application, NGET considers it may be necessary for a construction project to be undertaken in respect of such User Application, and it submits a Construction Application to SPT, SPT will charge NGET a fee at the time of each application.

This fee is intended to cover engineering costs and other expenses involved in preparing a TO Construction Offer or for carrying out the works necessary to determine that a TO Construction Offer is not required under Standard Condition D4A of SPT's licence. NGET has the option of paying either a fixed application fee or a fee based on the actual outturn cost. All application fees and fees for feasibility studies are subject to the addition of VAT and are non-refundable.

4.1.1 Fixed fees

Should NGET elect to pay a fixed fee for its Construction Application, SPT will charge NGET the appropriate application fee shown in Appendix A for a new connection, or Appendix B for a modified connection. SPT reserves the right to vary these amounts in exceptional circumstances. Fees will be applied depending on which zone the connection will be constructed – see below and Appendices A & B.

These zones are set out in detail in Schedule 4 of the STC.





4.1.2 Variable Price Application fees

For a variable price application, where NGET requests the actual engineering and other costs incurred, SPT will charge NGET the fixed fee in the appropriate table and carry out reconciliation once the actual costs have been established. Actual costs will be based on the SPT engineering charge-out rates shown in Appendix C.

4.1.3 Changes to Planning Assumptions

Should NGET notify SPT of changes in the planning assumptions after receipt of an application fee, SPT may levy an additional charge.

4.2 Feasibility Studies

Should NGET request assistance with the preparation of feasibility study, charges may be a fixed fee or the actual costs, by mutual agreement. The scale of the fee will be set on a case-by-case basis and will take into account the nature and extent of the work.

4.3 One-Off Costs and Additional Works requested

To provide or modify a connection, SPT may require to carry out works on the transmission system, which although directly attributable to the connection, may not give rise to additional connection assets. These costs are referred to as "one-off costs". Where these costs cannot be justified by planning standards and are incurred as a direct result of NGET's Construction Application, they will be included in the TO Construction Offer and charged accordingly.

The incremental costs of additional infrastructure related works above the minimum scheme required to connect a customer would always be recovered as a one-off capital charge.

Requests for diversions of transmission lines or cables, in connection with an application for a new or modified connection, including removal or relocation of towers will be treated as one-off costs, the charges for which will be calculated as in section 3.3.3.

The costs of Category 1 and 3 inter-tripping schemes for Generator connections (as defined in the Grid Code and the CUSC) will be recovered as One-off costs⁴.

4.4 Charges for Land Purchase, Consents and Wayleaves

Any capital costs incurred in providing a new or modified connection relating to planning and other statutory Consents; all wayleaves, easements, servitude rights, rights over or interests in land or any other consent; and permission of any kind as required for the

⁴ Category 1 schemes are those which have been initiated by the User, either as a result of a variation to the design or to allow early connection of generation, which would otherwise be delayed until infrastructure works can be completed. Category 3 are schemes which the User has elected as an alternative to reinforcement of a distribution network affected by the generation connection.



construction of the connection shall be paid to SPT by NGET. These costs will cover all of the SPT's engineering charges and out-of-pocket expenses incurred.

These out-of-pocket expenses may include planning inquiries or appeals; the capital costs together with reasonable legal and surveyors costs of landowners or occupiers in acquiring permanent easements, or other rights over land, in respect of any electric line or underground cable forming part of the new transmission connection.

Charges for legal costs associated with land purchase or access Consents would be due under the Construction Agreement for connection applications. Costs of this work will be charged in accordance with the charge-out rates in Appendix C.

Any capital costs incurred by SPT in acquiring land, shall be treated as infrastructure works and recovered through General System Charges.

4.5 Outages rearranged at the NGET's request

Should NGET request SPT to rearrange an outage, which has been planned and mutually agreed following the process outlined in the STC, NGET will pay SPT the unavoidable costs associated with re-arranging the outage.

5. INDICATIVE CHARGES

Appendix D provides some indicative connection charges. Factors which can affect these charges are:

- Generation capacity characteristics;
- Exit point demand and characteristics;
- Special security of supply requirements – greater or less than SP Transmission licence standards;
- Availability of Consents and wayleaves for lines, cables and substations; and
- Circuit routing difficulties, substation site conditions and access to routes and sites.

Formatted: Bullets and Numbering



Appendix A – Fixed-price application fees for NGET Construction Applications for new connections

	<i>Type of connection</i>	<i>MW</i>	<i>Fee (£k)</i>
1	Directly connected generation Zone B	<300 =>300 and <1000 =>1000	20 40 60
2	Directly connected generation Zones C & D	<100 =>100 <300 =>300 <500 =>500 <1000 =>1000	20 30 50 80 100
3	Directly connected generation Zones E & F	<300 =>300 and <1000 =>1000	20 40 60
4	Embedded generation Zone B	=>30	6
5	Embedded generation Zones C & D	=> 30	10
6	Embedded generation Zones E & F	=> 30	6
7	New Grid Supply Point Zone B	any	5
8	New Grid Supply Point Zones C & D	<100 =>100	20 30
9	New Grid Supply Point Zone E	<100 =>100	12 24
10	New Grid Supply Point Zone F	<100 =>100	10 20

Note that no application fee is payable for TO initiated works.



Appendix B – Fixed-prices for NGET Construction Applications for modified connections

	Type of Connection	MW *	Fee (£k)
1	Directly Connected Generation Zone B	<300	20
		=>300 and <1000	40
		=>1000	60
2	Directly Connected Generation Zones C & D	<100	20
		=>100 <300	30
		=>300<500	50
		=>500<1000	80
		=>1000	100
3	Directly Connected generation Zones E & F	<300	20
		=>300 and <1000	40
		=>1000	60
4	Embedded Generation Zone B	=>30	6
5	Embedded Generation Zones C & D	=>30	10
6	Embedded Generation Zones E & F	=>30	6
7	Modifications to existing GSP Zones C&D	All	20
8	Modifications to alter connection commissioning dates	All	5

Comment [j1]: NGC charge 6 as affected TO

Comment [j2]: NGC charge 6 as affected TO

* MW value is the final value being applied for

Note that no application fee is payable for TO initiated works.



Appendix C SPT Engineering Rates

<i>Grade</i>	<i>Rate (£/day)</i>
Section Manager or Internal Solicitor	720
Principal PowerSystems Engineer	600
Senior PowerSystems Engineer, Project Manager or Senior Wayleave Officer	500
PS Engineer or Draughtsman	400
Graduate Engineer	330
Admin support	260

All fees are subject to the addition of VAT.

**Appendix D Indicative connection charges**

The schedule below lists items of significant cost for which site-specific charges may be made for connection to SPT's transmission system:

<i>Description</i>	<i>£k</i>					
	<i>275kV</i>		<i>132kV</i>		<i>33kV</i>	
	<i>Charge</i>	<i>1st Year annual charge</i>	<i>Charge</i>	<i>1st Year annual charge</i>	<i>Charge</i>	<i>1st Year annual charge</i>
Single Busbar bay	900	102	600	68	-	-
Double Busbar bay	1400	158	700	79	-	-
Transformer cables, Per 100m (inc sealing ends)	-	-	90	10	70	8
275/132kV 240MVA transformer	1700	192	-	-	-	-
275/33kV 120MVA transformer	1200	135	-	-	-	-
132/33kV 90MVA transformer	-	-	700	79	-	-
132/33kV 30 MVA transformer	-	-	500	56	-	-

**Glossary of terms**

Authority	The Gas and Electricity Markets Authority (Ofgem).
Bilateral Connection Agreement	An agreement between NGET and the User covering the connection to SPT's transmission system.
Consents	In relation to any transmission system and or connection works: - a) all such planning (including Public Inquiry) and other statutory consents; and b) all wayleaves, easements, rights over or interests in land or any other consent; or for commencement and carrying on of any activity proposed to be undertaken at or from such works when completed c) permission of any kind as shall be necessary for the construction of the works
Construction Agreement	An agreement entered into between the SO and TO pursuant to the Connection and Use of System Code
CUSC	Connection and Use of System Code
NGET	Great Britain System Operator
Price Control	As set out in SPT's licence.
Pre-Vesting	Means on or before 31 March 1990
SO	System Operator
STC	The System Operator / Transmission Owner Code
TO	Transmission Owner
TRt	Total Allowed Revenue - as set out in SPT's licence
User	A generation or demand customer connected to SPT's transmission system and party to NGET's bilateral agreement(s).



**STATEMENT OF SCOTTISH HYDRO-ELECTRIC
TRANSMISSION LTD'S BASIS OF ITS
TRANSMISSION OWNER CHARGES.**

Effective 1 April ~~2005~~2006

The Gas and Electricity Markets Authority have approved this statement on 1 April ~~2005~~2006

Scottish Hydro-Electric Transmission Ltd.
Registered office:
Inveralmond House
200 Dunkeld Road
Perth
PH1 3AQ
Registered No: 213460

Price: £5

Contents	Page
<u>Page.....</u>	<u>2</u>
<u>Introduction</u>	<u>4</u>
<u>Principles</u>	<u>5</u>
Part 1.....	5
General System Charges	5
Part 2.....	6
Site Specific Charges	6
(1) Capital charges.....	6
(2) Transmission Operation and Maintenance charges	8
Calculation of the Gross Asset Value (GAV) and Net Asset Value (NAV)	9
Part 3.....	10
Other Charges.....	10
Application Fees.....	10
Feasibility Studies.....	11
One-off works.....	11
Miscellaneous Site Specific Charges	12
Energy Metering Systems	12
Outage Services Charges	12
De-Energisation and Disconnection Charges.....	12
Termination charges	13
Early Termination of Transmission Reinforcement Works.....	14
Miscellaneous Charges.....	14
"Self -Build" Option.....	14
<u>Glossary</u>	<u>16</u>
<u>APPENDIX 1 INDICATIVE CONNECTION ASSET CHARGES.....</u>	<u>18</u>
<u>FACTORS WHICH CAN INFLUENCE COSTS AND CHARGES.....</u>	<u>18</u>
<u>APPENDIX 2 – APPLICATION FEES</u>	<u>20</u>
Transmission Licensees' Boundaries of Influence Map	20
Table A – Fixed prices for new bilateral agreements.....	21
Table B – Fixed prices for modifications to existing bilateral agreements.....	21
<u>APPENDIX 3 CHARGE-OUT RATES.....</u>	<u>23</u>

STATEMENT OF SCOTTISH HYDRO-ELECTRIC TRANSMISSION LTD'S BASIS OF ITS TRANSMISSION OWNER CHARGES.

This statement is produced by Scottish Hydro-Electric Transmission Ltd (SHETL), the Transmission Owner (TO), which sets out the basis of charges for the provision by SHETL to ~~NGCNGET~~ (GBSO) of transmission services as specified in the System Operator Transmission Owner Code (STC). This Statement is effective from 1 April 2006 ~~the British Electricity Trading and Transmission Arrangements (BETTA) Go-Live date~~. The charges shall consist of general system charges, site specific charges and other charges as set out below.

Introduction

SHETL is obliged, under Special Condition J2 of its electricity transmission licence, to prepare a statement approved by the Authority setting out the basis upon which charges will be made for provision of transmission services in such form and detail as shall be necessary to enable ~~NGCNGET~~ to make a reasonable estimate of the charges to which it would become liable for the provision of SHETL's services. Special Condition J2 in respect of connection to the licensee's (SHETL) transmission system include:

- a. a schedule listing those items (including carrying out of works and the provision and installation of electrical lines or electrical plant or meters) of significant cost liable to be required for the purposes of connection (at entry and exit points) to the licensee's transmission system for which site specific charges may be made or levied and including (where practicable) indicative charges for each such item and (in other case) an explanation of the methods by which and the principles on which such charges will be calculated ;*
- b. the methods by which and the principles on which site specific charges will be made in circumstances where the electric lines or electrical plant to be installed are (at the licensee's discretion) of greater size or capacity than required;*
- c. the methods by which and the principles on which any charges (including any capitalised charge) will be made for maintenance and repair required of electrical lines or electrical plant or meters provided or installed for making a connection to the licensee's transmission system;*
- d. the methods by which and the principles on which any charges will be made for disconnection from the licensee's transmission system and the removal of electrical plant, electrical lines and ancillary meters following disconnection, and*
- e. such other matters as shall be specified in directions issued by the Authority from time to time.*

Principles

This statement sets out SHETL's charges for the provision of transmission services to NGCENGET by invoicing NGCENGET according to the terms set out in the STC. In order to calculate the charges of providing these services, SHETL must apportion its assets to one of two charging categories, General System Charge and Site Specific charges.

Site Specific Charges relate to assets classed as connection under this methodology. In general, connection assets are defined as those assets solely required to connect an individual User to the Transmission System, which are not and would not normally be used by any other connected party (i.e. "single user assets"). For the purposes of this statement, all connection assets at a given location shall together form a connection site.

Connection assets are defined as all those single user assets which:

- a) for double busbar type connections, are those single user assets connecting the User's assets and the first SHETL owned substation, up to and including the double busbar bay;
- b) for teed or mesh connections, are those single user assets from the User's assets up to, but not including, the HV disconnector or the equivalent point of isolation:-
- c) for cable and overhead lines at a transmission voltage, are those single user connection circuits connected at a transmission voltage equal to or less than 2km in length that are not potentially shareable.

Shared assets at a banked connection arrangement will not normally be classed as connection assets except where both legs of the banking are single user assets under the same Bilateral Connection Agreement.

Indicative Gross Asset Values of assets for illustrative purposes are given in Appendix 1.

SHETL may at the request of NGCENGET carry out other work, which is not covered by General System or Site Specific Charges, including, for example, outage rescheduling, dealing with applications for connection, obtaining consents. The principles for calculating such other charges are also set out in this statement.

The methodology for calculating these three classes of charge, i.e. General System Charge, Site Specific Charges and Other charges is set out in this statement.

Part 1

General System Charges ~~Part 1 – General System Charge~~

The **General System Charges** reflect the cost of installing, operating, replacing developing and maintaining the SHETL transmission infrastructure and pre-Vesting connection assets. These activities are undertaken to the standards prescribed by SHETL's licence, to provide the capability to allow the flow of bulk transfers of power between connection sites and to provide transmission system security.

A Maximum Allowed Revenue (MAR) for these activities and including those associated with post-vesting pre-BETTA connections and BETTA implementation costs is set by the Authority at the time of SHETL's Transmission price control review for each succeeding price control period.

The **General System Charges** will be set to recover the Maximum Allowed Revenue (net of post-Vesting pre-BETTA connections site specific charges) as set by the Price Control (allowing for any Kt adjustment for under or over recovery in a previous year).

For the purposes of NGCNGET's price control, which requires the BETTA implementation costs to be recovered through Balancing Services Use of System (BSUoS) charges, the BETTA implementation costs will be separately identified.

No service provided by SHETL shall be treated as an excluded service in so far as it relates to the provision of services remunerated under the General System Charge as set out in the STC and associated procedures. In accordance with the STC and associated procedures, SHETL will invoice one twelfth of the General System Charge (which may be subject to amendment) to NGCNGET.

Part 2

Site Specific Charges~~Part 2 — Site Specific Charges~~

The **Site Specific Charges** are set to recover costs associated with the post-Vesting connections specified in the TO Construction Agreement and/or STC for the relevant connection site.

In accordance with the STC and associated procedures, SHETL will invoice one twelfth of the Site-Specific charges for each connection site (which may be subject to amendment) to NGCNGET.

Site-Specific charges for the post-Vesting connections consist of (1) Capital charges and (2) Transmission operation and maintenance charges.

(1) Capital charges

Capital charges reflect the cost of purchase and installation of the connection assets.

Post-vesting pre-BETTA connections

For post-vesting pre-BETTA connections commissioned before the BETTA go-live date, where the capital costs are recovered through annual connection charges, these charges are based on a rate of return on the Net Asset Value (NAV) plus a depreciation charge based on a 40 year life. The rate of return that will be applied to the NAV is 8.7%. For connection assets where the User has paid 100% (full) capital contribution towards the purchase and installation of the assets, there are no annual capital charges.

Post-BETTA connections

For assets installed after 1 April 2005 the ~~BETTA go live date~~, SHETL will recover the cost of connection from NGCNGET by means of either:-

- Option (a) A full capital contribution charge; or
- Option (b) Annual capital charge, over the lifetime of the assets; or
- Option (c) A partial capital contribution charge with reduced annual charge.

SHETL's connection offer to NGCNGET will be based on one of the following price basis and payment terms will reflect either Option (a), (b) or (c) above.

(i) Fixed price offer

Upon receipt of NGCNGET's formal application for a connection, SHETL will submit a fixed price offer within three months of the effective application date. The Fixed price offer option is available for a connection application where the planned connection completion date is generally within 18 months from the offer date; or

(ii) Indicative price offer

Upon receipt of NGCNGET's formal application for a connection, SHETL will submit an indicative price offer within three months of the effective application date. When and SHETL has obtained sufficient information to determine the price, SHETL will confirm or amend the indicative price to a Fixed price. This will be at least six months prior to date of commencement of any works (as stated in the indicative offer). The Indicative price offer will, in practice, only become a Fixed price offer when SHETL is in a position to forecast with reasonable accuracy what the total costs of the project will actually be. This may be, for example when the scope of works has been finalised and prices from sub-contractors have been obtained.

~~For the avoidance of doubt, for either fixed or indicative price offers, there will be no reconciliation of the price on completion of the works.~~

NGCNGET will indicate in its formal application for a connection to SHETL which price offer (Fixed price offer or Indicative price offer) and payment Option (a), (b) or (c) it requires.

SHETL reserves the right to make an offer of terms on a different price basis if SHETL is aware that the choice exercised by NGCNGET is not the same choice being exercised by the party requesting the connection ("the User") in its relationship with NGCNGET.

For Option (a) where NGCNGET has requested and paid full capital contribution there will be no annual capital connection charges (i.e. no depreciation and rate of return charges).

For Option (c) where NGCNGET has requested and paid partial capital contribution the annual capital connection charge will recover the remaining capital cost. The annual capital

connection charge will become payable the day after commissioning of the connection assets or from the day the connection assets become available for use.

Where NGCNGET has elected Option (a) or Option (c), SHETL will require the relevant capital charge to be paid in advance of commencement of connection works but this may be phased over the construction period according to a payment schedule as set out in the TO Construction Agreement.

Where NGCNGET has elected Option (b) or (c) the capital costs recovered through annual charges are based on a rate of return on the Net Asset Value (NAV) plus a depreciation charge based on a 40 year life. The rate of return that will be applied to the NAV is 8.7%. The depreciation period for post BETTA connection assets may, by mutual agreement, be less than 40 years but never more than 40 years.

Where SHETL installs assets of greater size and/or capacity than the minimum that would be required for that connection using standard equipment ratings, the costs in excess of that minimum normally shall be borne by SHETL.

For Option (a) the sum quoted in the construction agreement for the connection assets at the relevant site will become the Gross Asset Value of (GAV) of the connection assets for the purposes of calculating the annual transmission operation and maintenance charges for the site.

Where a User has already accepted a pre-BETTA SHETL offer based on capital contributions but construction will not be completed before the BETTA go-live date, SHETL will in the first instance submit an offer to NGCNGET based on Option (a).

If SHETL considers that assets require to be replaced prior to the end of their normal economic lifetime (normally 40 years), the replacement costs will be borne by SHETL within the remaining economic life of the original assets. On expiry of the expected lifetime of the original assets, the connection capital charge will be recalculated taking account of the NAV of the replacement connection assets, together with the normal provision for depreciation.

If a connection asset at a pre-Vesting site is replaced ~~after the BETTA go-live date~~ the cost will be recovered as a site-specific charge.

Where a modification to the existing connection occurs at NGCNGET's request or due to developments to the transmission system, their connection charges reflect any additional connection assets that are necessary to meet NGCNGET's requirements. Charges will continue to be levied for existing assets that remain in service. Termination charges as described below will be charged for any existing connection assets made redundant as a result of the modification.

(2) Transmission Operation and Maintenance charges

The transmission operation, repair and maintenance site-specific charge in respect of connections provided by SHETL is not limited to the routine maintenance of assets in accordance with specified maintenance frequencies, but also includes the following:

- A proportion of the cost of operating the transmission business;
- total site care, covering site safety, security and environmental protection, local liaison, notably with statutory authorities, wayleave grantors and members of the public;
- payment of local authority charges, electricity, water and telephone charges associated with the connection site;
- standby and out-of-hours service throughout the year

For Options (a), (b) or (c) above as relevant and for post-vesting pre-BETTA connections, the transmission operation and maintenance annual charges will be calculated as set out below. The transmission operation and maintenance annual charges are divided into two parts;

(a) Site-specific Maintenance charge

The site-specific maintenance annual charge recovers the on-going maintenance (including repairs) of the connection asset and is based on a percentage of the GAV of the connection asset. The annual site-specific maintenance charge is 0.5% of the connection asset GAV. For the avoidance of doubt, there will be no reconciliation of the site-specific maintenance charge.

(b) Transmission Running charge

The Transmission Running charge is calculated each year to reflect the appropriate amount of other transmission operation costs (rates, operation, indirect overheads) incurred by SHETL function that should be attributed to connection assets. This charge is based on a percentage of the GAV of the connection asset. The Transmission Running charge is 1.5% of GAV. For the avoidance of doubt, there will be no reconciliation of the transmission running charge.

Calculation of the Gross Asset Value (GAV) and Net Asset Value (NAV)

The GAV represents the initial total cost of a connection asset to SHETL. For a new connection asset it will be the costs incurred by SHETL in the provision of that connection asset. Typically the GAV is made up of the following components:

Construction costs - costs of bought in services
 SHETL engineering - allocated equipment and engineering costs including overheads
 Interest during construction – financing cost

The GAV of an asset is re-valued each year normally using the average of the Retail Price Index (RPI) between May and October,

$$\text{i.e. } GAV_n = GAV_{n-1} * RPI_n$$

where $RPI_n = (\text{May} - \text{October average RPI Index in year } n-1) / (\text{May} - \text{October average RPI Index in year } n-2)$

The NAV of each asset for year n, used for charge calculation, is the average (mid year) depreciated GAV of the asset. The following formula calculates the NAV of an asset with a 40 year life, where A_n is the age of the asset (number of completed charging years old) in year n:

$$NAV_n = GAV_n * (39.5 - A_n) / 40$$

Part 3

Other Charges

Part 3 - Other Charges

Over and above the General System and Site Specific charges mentioned above, SHETL may incur other costs, including, but not limited to

- costs associated with processing applications for connection to the system
- one-off costs associated with new connections
- cost of rearranging outages at NGCNGET's request

Any costs incurred by SHETL as a result of NGCNGET's requirements that are not otherwise recoverable through General System or Site Specific Charges will be charged to NGCNGET according to the following principles.

Application Fees

SHETL will charge NGCNGET an application fee at the time of each application for a new or modified connection to SHETL's transmission system. This fee is intended to cover engineering costs and other expenses involved in preparing an offer of terms.

NGCNGET can opt to pay a fixed price application fee in respect of their application or pay a variable application fee, which is based on the actual costs incurred. The fixed price fees for applications are detailed in Appendix 2.

If NGCNGET chooses to pay a variable application fee, SHETL will charge NGCNGET the fixed price fee in the appropriate table detailed in Appendix 2 and carry out reconciliation once the actual engineering and out-of pocket expenses have been established. Actual costs will be based on the SHETL charge-out rates detailed in Appendix 3. Where actual costs exceed the advance, SHETL will issue an invoice for the excess. Conversely, where SHETL does not use the whole of the advance, the balance will be refunded.

Should NGCNGET notify SHETL of changes in the planning assumptions after receipt of an application fee, SHETL may levy an additional charge.

In exceptional circumstances where NGCNGET has requested an application which involves significant costs over and above normally expected (e.g. substantial system studies, specialist surveys, investigations) to process an offer of terms then SHETL reserves the right to vary

the applicable fixed fee quoted in Table A and Table B. Under these circumstances, SHETL will following discussion with NGENGET, advise the appropriate applicable fee.

SHETL will refund application fees and consent payments either on commissioning or against the charges payable in the first three years of the new or modified agreement. The following conditions apply:

- The refund will be net of external costs;
- Where a new or modified agreement is signed and subsequently modified at NGENGET's request before any charges become payable, SHETL will refund the original application fee. SHETL will not refund the fees in respect of the subsequent modification(s).

Feasibility Studies

If NGENGET requests a feasibility study in connection with alterations to or extension of the SHETL network a fee is payable based on an advance of SHETL engineering and out-of-pocket expenses. The fee payable by NGENGET will vary according to the size of the study and the amount of work involved. Where actual engineering and out-of-pocket expenses exceed the advance, SHETL will issue an invoice for the excess. Conversely, where SHETL does not use the whole of the advance, the balance will be refunded.

A schedule of charge-out rates for different classes of SHETL staff is attached at Appendix 3.

One-off works

To provide or modify a connection, SHETL may need to carry out works on the transmission system, which although directly attributable to the connection, may not give rise to additional connection assets. These works are defined as "one-offs". Liability for one-off charges is established with reference to the principles laid out below:

- Where a cost cannot be capitalised into either a connection or infrastructure asset, typically a revenue cost
- Where a non-standard incremental cost is incurred as a result of NGENGET's request, irrespective of whether the cost can be capitalised
- Termination Charges associated with the write-off of connection assets at the connection site.

The one-off charge is a charge equal to the cost of the works involved.

The calculation of the one-off charge for write-off of assets is outlined below:

Write-off Charge = 100% of remaining NAV of redundant assets

The costs of diversion of transmission lines or cables, in connection with an application for a new or modified connection, including removal or relocation of towers will be recovered as one-off charge.

The costs of Category 1 and 3 inter-tripping schemes for generator connections (as defined in the Grid Code and the CUSC) will be recovered as one-off charge.

One-off charges are payable upon completion of the works.

Miscellaneous Site Specific Charges

Other contract specific charges may be payable by NGCNGET for a specific site, these will be set out in the TO Construction Agreement and/or STC.

Energy Metering Systems

The charges to NGCNGET for the provision of energy metering systems will be on a similar basis as other SHETL Connection Assets. The electronic components of the energy metering system have a 10 year replacement and depreciation period whilst the non-electronic components normally retain a 40 year replacement and depreciation period

Outage Services Charges

Where prearranged outages are rearranged at NGCNGET's request or where NGCNGET require additional services for planned or unplanned outages over and above the normal service provided under general system charges, NGCNGET will be liable for outage service charges. These charges reflect the costs incurred by SHETL in accommodating NGCNGET's request. They include, but are not limited to

- Costs (including where appropriate, liquidated damages) of standing down contractors until outage starts. Costs will be derived from contractors' invoices and, in the case of liquidated damages, from the relevant agreement(s).
- Costs of overtime working to reduce outage time such as to reduce NGCNGET's costs in maintaining system security. Cost will be based on overtime hours worked on the particular outage.
- Costs of installing additional equipment, such as bypass arrangements.

Where an outage is rearranged at NGCNGET's request, SHETL will use all reasonable endeavours to minimise the charge to NGCNGET by redeploying staff onto other work.

Charge-out rates to assess indicative costs for overtime working are given at Appendix 3.

De-Energisation and Disconnection Charges

Where NGCNGET wishes a supply to be permanently de-energised, a minimum of two business days notice (or such other period as may be specified in the TO Construction Agreement and/or STC) to that effect should be given to SHETL. SHETL will arrange to de-energise the supply and read the metering equipment, where appropriate, for billing purposes. An additional charge will be made for this service if undertaken outside normal working hours.

Temporary de-energisation (and subsequent re-energisation) resulting from the failure by NGCENGET to comply with the terms of their relevant agreement, or carried out at the request of NGCENGET will be at the expense of NGCENGET.

Where it becomes necessary to disconnect a customer (at the request of NGCENGET), that is to have SHETL's equipment removed from site, for any reason, any payments outstanding in first providing that connection will become due forthwith.

If NGCENGET requests disconnection, this should be requested in writing. On receipt of such a request SHETL will take all reasonable steps to remove the equipment in accordance with the NGCENGET's reasonable requirements. SHETL should be consulted at an early stage and a programme for the removal of equipment will be subject to individual assessment.

On termination SHETL retains the right to remove its equipment. Where it is cost effective to do so SHETL will remove such equipment, and no charge will be made to NGCENGET. For assets where it is not cost effective to recover (e.g. buried cables) will normally be made safe and left on site, but if NGCENGET requires SHETL to remove them, the cost of removal, will be payable by NGCENGET. All such equipment will remain the property of SHETL until otherwise agreed in writing with SHETL.

Termination charges

Where NGCENGET decides prior to the expiry of the normal 40 year replacement period of the assets involved, that all or part of a connection is no longer required and either applies to modify the agreement, or serves notice of a termination, a termination amount is payable to SHETL, except where the full capital charge ~~has~~ been paid in advance. The termination charge is calculated on the basis of the Net Asset Value of the assets involved, with due allowance for any financing contribution made by NGCENGET plus all reasonable costs associated with removal of the assets.

The termination charge payable by NGCENGET will be calculated as follows:

Where the connection assets are made redundant as a result of the termination or modification to the TO Construction Agreement and/or STC, NGCENGET will be liable to pay an amount equal to the NAV of such assets as at the end of the financial year in which termination or modification occurs, plus:

- The reasonable costs of removing such assets. These costs being inclusive of the costs of making good the condition of the connection site
- If a connection asset is terminated before the end of a financial year, the connection charge for the full year remains payable.
- For assets which SHETL has determined to replace upon the expiry of the relevant replacement period in accordance with the provisions set out in the STC and in respect of which a notice to disconnect or terminate has been served in respect of the connection site at which the assets were located; and due to the timing of the replacement of such assets, no site-specific connection charges will have become

payable in respect of such assets by NGCNGET by the date of termination; the termination charges will include the reasonable costs incurred by SHETL in connection with the installation of such assets

- Previous capital contributions will be taken into account

The Calculation of Termination amounts for financial year n is as follows:

$$\text{Termination Charge}_n = C_n + \text{NAV}_{an} + R - \text{CC}$$

where:

C_n = Outstanding connection charge for year

NAV_{an} = NAV of the relevant assets as at 31 March of financial year n

R = Reasonable costs of removal of redundant assets and making good

CC = An allowance for previously paid capital contributions

Examples of reasonable costs of removal for terminated assets and making good the condition of the site include the following:

If SHETL terminates a circuit breaker as a result of a User leaving a site, this may require modifications to the protection systems.

If an asset were terminated and its associated civils had been removed to 1m below ground then the levels would have to be made up. This is a common condition of planning consent.

Early Termination of Transmission Reinforcement Works

When a TO Construction Agreement for a connection is terminated by NGCNGET prior to completion of the works then, in addition to the costs incurred at the time of termination for connection assets, NGCNGET must pay to SHETL the costs incurred at the time of termination for any transmission reinforcement works which were required as a direct consequence of NGCNGET's application for a connection as included in Appendix H1.

Miscellaneous Charges

If NGCNGET request any other work by SHETL not covered by General System, Site Specific or Other Charges specified above, SHETL will provide terms for the requested work.

"Self-Build" Option

The principles set out above apply for situations where SHETL procures and installs the connection assets on behalf of the User. However, it is also possible for the User themselves to procure and install the connection assets. Such arrangements would be subject to the assets being designed and installed to suitable technical standards to be agreed between SHETL and the User to ensure the ongoing security and operability of the transmission system. Other

agreements and indemnities may also be required to ensure that there are no adverse consequences for other users of the transmission system as a result of the User's decision to "self-build".

Subject to these arrangements, SHETL would adopt the self-build assets free of charge and assume responsibility for their ongoing maintenance.

At present, the self-build arrangements such as the technical specifications and adoption agreement are still under development. However, should a User wish to take advantage of the self-build option, this should be made clear in their formal application to NGET, and SHETL will work with the User to provide the necessary specifications and agreements.

Glossary

Authority The Gas and Electricity Markets Authority (Ofgem)

BETTA go-live date ~~1 April 2005~~ a date which the Secretary of State indicates in a direction shall be the ~~BETTA Go-Live Date~~

Bilateral Connection Agreement – agreement between NGCNGET and the User covering the connection to SHETL's transmission system.

Category 1 schemes are those which have been initiated by the User, either as a result of a variation to the design or to allow early connection of generation, which would otherwise be delayed until infrastructure works can be completed.

Category 3 schemes are those which the User has elected as an alternative to reinforcement of a distribution network affected by generation connection.

Consents In relation to any transmission system and/or connection works:-

- a) all such planning (including Public Inquiry) and other statutory consents; and
- b) all wayleaves, easements, rights over or interests in land or any other consent; or for commencement and carrying on of any activity proposed to be undertaken at or from such works when completed.
- c) permission of any kind as shall be necessary for the construction of the works

TO Construction Agreement An agreement between NGCNGET and SHETL pursuant to the STC.

GBSO (Great Britain System Operator) being National Grid Electricity Transmission Company plc (NGCNGET)

Maximum Allowed Revenue as set out in SHETL's licence

Price Control as set out in SHETL's licence.

Post-BETTA means on or after BETTA go-live date

Post-Vesting means after 30 March 1990 and before BETTA go-live date

Pre-BETTA means before BETTA go-live date

Pre-Vesting means on or before 30 March 1990

Retail Price Index means general index of retail prices published by the Office for National Statistics each month in respect of all items.

Transmission Owner Activity (TO) The function of SHETL's Transmission Business covered under the Transmission Owner Activity Price Control

Transmission system The system which consists (wholly or mainly) of high voltage lines and electrical plant owned or operated by SHETL and used for the transmission of electricity

from one generating station to a substation or to another generating station or between substations or to any Interconnector

Transmission voltage Voltages at 132kV or above or at a substation 11kV or 33kV whose primary voltage is 132kV or above.

User means a person connected to SHETL's Transmission system and party to NGENGET's Bilateral Connection Agreement(s).

APPENDIX 1 INDICATIVE CONNECTION ASSET CHARGES

The Schedule give typical costs excluding VAT for additions to SHETL's transmission system. The costs shown are current at the time of publication, are subject to change without notice and may vary upon system configuration, consents, site conditions etc.

Description	£000s			
	275kV	132kV	33kV	11kV
Single Busbar bay	935	545	360	200
Double Busbar bay	1090	615	400	235
Single circuit Trident £/km	—	170	—	—
Double circuit Steel Tower £/km	1260	490	—	—
Transformer Cables per km (inc terminations)	1680	770	400	250
275/132kV 240MVA transformer	2500			
275/33kV 120MVA transformer	2100			
132/33kV 90MVA transformer		1400		
132/33kV 30 MVA transformer		1250		
132/11kV 30 MVA transformer		1150		

FACTORS WHICH CAN INFLUENCE COSTS AND CHARGES

- Standards governing the system.
- Special security of supply requirements
- Length of cable/line required from existing system.
- Size of Exit point / Entry point capacity requirements in relation to available capacity of existing network, including the age of the assets and the condition of the network.
- Whether any extension or reinforcement of the existing network is by underground cable or overhead lines.
- Type of ground requiring excavation; type and extent of reinstatement necessary, including New Roads and Street Works Act requirements; need for road crossings.
- Availability of wayleaves/easements for cables and lines including any planning consents.
- Availability of suitable substation sites including any necessary planning consents.
- Necessity of overtime working.

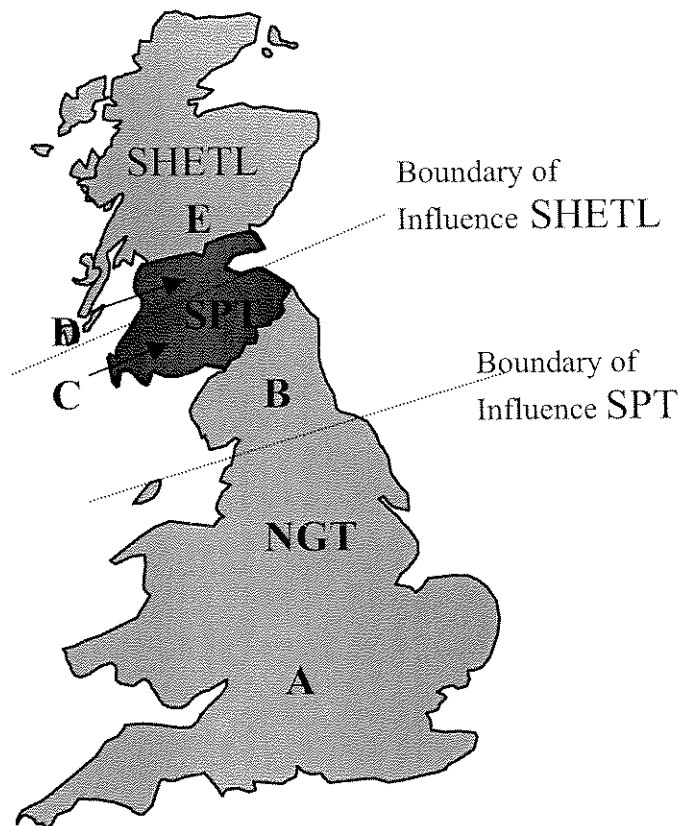
Illustrative list of Abnormal Services which may be reflected in the Site-Specific Connection Charges

Illustrative list of abnormal services which may be reflected in the connection charge.

- progression of work required other than in an orderly fashion in accordance with normal engineering policies and practices thus imposing additional costs;
- transformer/ substation sites not provided to the Company in suitable locations at normal prices or rents, taking account both of cable access and access by personnel;
- loads with abnormal characteristics, which affect the security and standard of service on the system, for example, arc welders and large motors.

APPENDIX 2 – APPLICATION FEES

Transmission Licensees' Boundaries of Influence Map



Fees will be applied depending on which zone the connection will be constructed. See Table A or B below. The zones and boundaries of influence are set out in detail in the GB Seven Year Statement.

All Fees subject to other additional costs covering any other special design requirements e.g. subsea survey, advance wayleaving etc being payable or underwritten by NGCNGET.

All fees are subject to the addition of VAT.

Table A – Fixed prices for new bilateral agreements

	Connection Application Type & Zone	MW	Fee (£000)
1A	Directly Connected generation Zone E (Host SHETL, <i>Affected SPT)</i>	<100	20
		=>100 <300	40
		=>300<500	75
		=>500<1000	100
		=>1000	130
1B	Directly Connected generation Zone D (Affected SHETL, <i>Host SPT)</i>	<100	10
		=>100 <300	20
		=>300<500	35
		=>500<1000	50
		=>1000	70
2	Directly connected reactive only Zone E and Zone D		10
3	Embedded Generation* Zone E and Zone D	<5	3
		=>5	5
4A	New Supply point Zone E (Host SHETL, <i>Affected SPT)</i>	<100	20
		=>100	40
4B	New Supply point Zone D (Affected SHETL, <i>host SPT)</i>	<100	10
		=>100	20
5	Suppliers		No charge

Table B – Fixed prices for modifications to existing bilateral agreements

	Connection Application Type & Zone	MW	Fee (£000)
6A	Directly Connected generation Zone E (Host SHETL, <i>Affected SPT)</i>	<100	20
		=>100 <300	40
		=>300<500	75
		=>500<1000	100
		=>1000	130
6B	Directly Connected generation Zone D (Affected SHETL, <i>Host SPT)</i>	<100	10
		=>100 <300	20
		=>300<500	35
		=>500<1000	50
		=>1000	70
7	Addition/reduction of Embedded* Generation Zone E and Zone D		3
8A	Addition/reduction of a transformer at existing supply point Zone E (Host SHETL, Affected SPT)		10
8B	Addition/reduction of a transformer at existing connection point Zone D (Affected SHETL, host SPT)		5

9A	Modifications to existing supply points and agreements Zone E (Host SHETL, Affected SPT)	<100 =>100	15 20
9B	Modifications to existing supply points and agreements Zone D (Affected SHETL, host SPT)	<100 =>100	7 10
10	Modifications to alter connection/commissioning dates Zone E and Zone D		7
11	Increase in Transmission entry capacity Zone E and Zone D		7

	Zone C	N/A	N/A
	Zone B	N/A	N/A
	Zone A	N/A	N/A

Note: * Embedded Generation. – SHETL will inform NGCNGET only whether there are any transmission system implication and will not produce any formal offer of terms. In the event SHETL advise that there is system implication, NGCNGET will need to submit a formal application and upon receipt of this SHETL will then make a formal offer to NGCNGET.

APPENDIX 3 CHARGE-OUT RATES

Grade	Rate (£/day)
Section manager or Internal Solicitor	720
Principal Power Systems Engineer	600
Senior Power Systems Engineer, Project Manager or Senior Wayleave Officer	500
PS Engineer or Draughtsman	400
Graduate Engineer	330
Craftsman (linesman, cable jointer, substation fitter)	295
Admin support	260

All fees are subject to the addition of VAT.