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Your Ref:
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Direct Dial: 020 7901 7430
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Date: 4 April 2008

Dear Colleague

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

Scottish Hydro-Electric Transmission Limited ("SHETL") and Scottish Power Transmission Limited ("SPTL") are the Transmission Owners of the high-voltage transmission networks in the north and south of Scotland, respectively. In this capacity they provide services to National Grid Electricity Transmission plc ("NGET")¹, who in turn provides transmission services to users of the GB electricity transmission network.

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

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

Pursuant to Special Condition J10 (5) of SHETL and SPTL's Electricity Transmission Licences SHETL and SPTL shall, at least once every year the licence is in force, 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 received updated versions of the Statement of the Basis for Transmission Owner Charges from both SHETL and SPTL, for approval. Tracked changed versions of both these documents are attached to this letter as appendices.

In previous years, we have sought views from third parties on modifications to these statements to be effective from 1 April 2008. Following this precedent we now seek views on the proposed modifications to SHETL's and SPTL's Statements of the Basis for Transmission Owner Charges. In particular views are sought on whether: -

- The statement provides sufficient clarity on the basis for Transmission Owner charges to NGET; and
- The statements continue to be accurate in all material respects.

¹ NGET is the owner of the high-voltage transmission network in England and Wales and the system operator of Great Britain's high-voltage national transmission networks.

Views are invited by **Friday 2 May**. Where possible, responses should be sent electronically to anthony.mungall@ofgem.gov.uk marked "**Response on TO charging statement**". Alternatively, written responses should be sent to:

Anthony Mungall
Office of Gas and Electricity Markets
70 West Regent Street
Glasgow
G2 2QZ.

All responses will be help electronically by Ofgem. They will normally be published on the Ofgem website unless they are clearly marked confidential.

If you wish to discuss or query the issue raised in this open letter please contact Anthony Mungall, telephone 0141 331 6010.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Steve Smith', with a stylized, cursive script.

Steve Smith
Managing Director, Networks



ScottishPower EnergyNetworks

**STATEMENT OF THE BASIS OF
TRANSMISSION OWNER CHARGES
APPLICABLE FROM xxx 2008**

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**THIS STATEMENT HAS BEEN APPROVED BY THE GAS AND ELECTRICITY
MARKETS AUTHORITY**

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1 INTRODUCTION

1.1 Licence obligations

SP Transmission Limited (SPT) is required under its transmission licence, Special Condition J10, 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.

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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.

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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 SPTL 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.

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.

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1.3 Notification of Charging Information to NGET

SPT, under Special Condition J8 of its licence, will notify NGET of its best estimates for the amounts TSPT and EXSt in respect of year t by 1st November of year t-1, where:

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TSPT_t means an amount no more than TO_t - EXSt_t.

TO_t means the allowed transmission owner revenue in the relevant year t calculated in accordance with special condition J2 (Restriction of transmission charges: revenue from transmission owner services); and

EXSt_t means the connection charges, if any, which are remunerated under special condition J2 (Restriction of transmission charges: revenue from transmission owner services) in respect of connections made after the grant of this licence

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and for the avoidance of doubt, such charges ~~may~~ include charges for the operation and maintenance of the relevant connection

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and where the aggregate of TSP and EXS_t is equivalent to the regulated transmission revenue of the licensee in relevant year t.

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

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2 GENERAL SYSTEM CHARGES

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

- Capital costs for providing, replacing and/or refurbishing SPT's Infrastructure assets
- Capital costs for replacing and/or refurbishing SPT's pre-Vesting Connection Assets, and
- 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 TOT in SPT's transmission licence and is referred to as TO General System Charges in the STC. General System Charges include all O&M Charges for all pre and post-vesting connection assets including metering.

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One twelfth of the total allowed revenue TOT (which may be subject to amendment) will be billed to NGET each month. In respect of the relevant year commencing 1 April 2007 and each subsequent relevant year t , allowed transmission owner revenue shall be calculated in accordance with the SPT's transmission licence.

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$$TO_t = PR_t + TIRG_t + PT_t + IP_t + CxIncRA_t + IE_t + LC_t - K_t$$
 where: ¶
 TO_t . . . means allowed transmission owner revenue in the relevant year t ¶
 PR_t . . . means the base transmission revenue ¶
 $TIRG_t$. . . means the aggregate of the annual revenue allowances for each transmission investment project specified in Schedule C ¶
 PT_t . . . means the revenue adjustment term, in respect of allowed pass through items ¶
 IP_t . . . means the total amount of incentive revenue ¶
 $CxIncRA_t$. . . means the revenue adjustment term, made in the relevant year commencing 1 April 2012 in respect of the application of the capital expenditure incentive regime, ¶
 IE_t . . . means the allowance made in respect of the relevant year t representing the estimated costs incurred by the licensee in that relevant year in association with the issuance of new equity, ¶
 LC_t . . . means the revenue adjustment term, made in the relevant year commencing 1 April 2012 in respect of the full recovery of efficiently incurred logged up costs, and ¶
 K_t . . . means the revenue restriction correction factor. ¶

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3 SITE SPECIFIC CHARGES

3.1 Pre-Vesting Connection Assets

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 will be recovered from NGET.

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3.3 Payment Options

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

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

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

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

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

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

** NAV is based on the revalued GAV*

*** Return = a reasonable rate of return (normally 6.87%, but may be higher in line with the risk profile).

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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 firm 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.

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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 6.87% of the Construction Costs)

3.3.4 Option 4 Capital Contribution, Firm Price

Full capital contribution based on a firm 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.

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

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SPT will consider on a case-by-case basis a combination of the above options. It should also be noted that all offers made by the Company, in response to a new or modified connection application by NGET, will initially be made on an indicative basis. Should a firm price offer be requested, a fixed connection charge will only be provided at a later date after tender returns for major plant items and other material expenditure have been received.

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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 Amount 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_n + R where:

C_n = Outstanding Connection Charge for year n

NAV_n = NAV of connection assets 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:

- 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.

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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 NGET.

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 for all transmission assets will be collected through General System Charges and are not addressed in this statement.

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.

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4 OTHER CHARGES

4.1 Application Fees

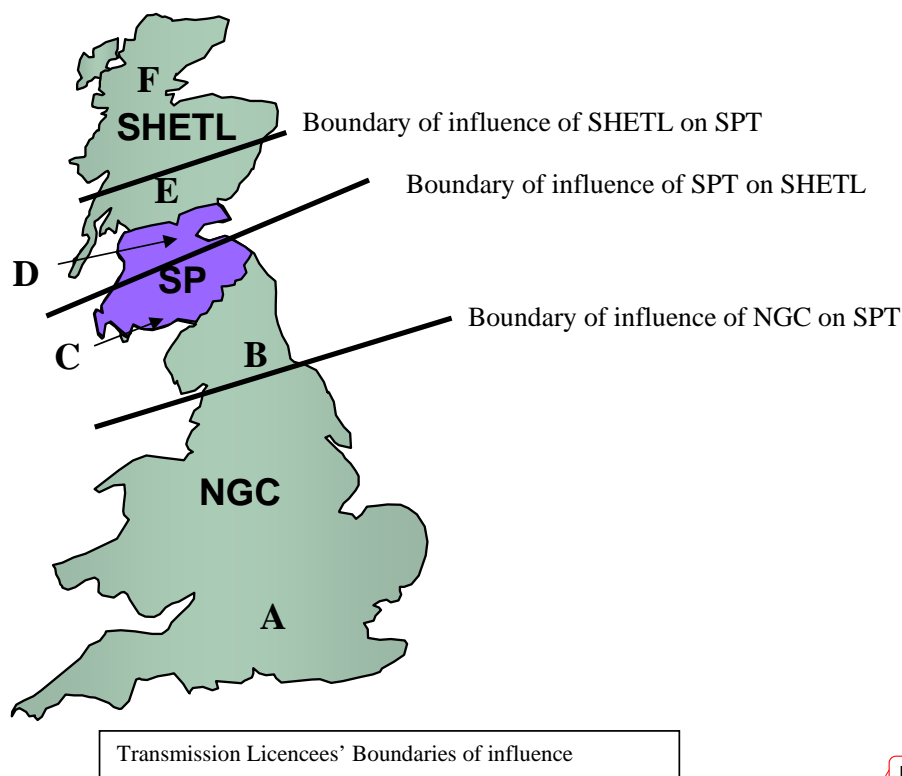
If, as a consequence of a User Application, NGET considers it may be necessary for a construction project to be undertaken in respect of such User Application, and it submits a Construction Application to SPT, SPT will charge NGET a fee at the time of each application.

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.



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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

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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 a feasibility study, charges may be on a fixed fee or actual cost basis, 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.

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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 costs ¹.

4.4 Abortive Works Charges

If as a result of a modification application to reduce TEC, received after commencement of the Company’s Works, SPT is required to change the specification of the transmission construction works and SPT has previously carried out some or all of the said works which

¹ 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.

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are now no longer required (“Abortive Works”) NGET shall be required to make a payment to SPT in respect of:

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all fees, expenses and costs of whatever nature reasonably and properly incurred or due by SPT in respect of the Abortive Works for which SPT is responsible or has or may otherwise become liable.

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Deleted: engineering charges in respect of the Abortive Works;¶

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in respect of the Abortive Works;

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<#>fees, expenses and costs properly payable by SPTL in respect of, or arising from the termination by it or any third party of any contract for or relating to the carrying out of the Abortive Works for which SPTL is responsible or has or may otherwise become liable (including any such arising out of the STC);¶
 <#>a sum equal to the reasonable costs of removing any Abortive Works and of making good the remaining plant and apparatus following such removal; and¶
 <#>interest on any such amounts from the date they were paid by SPTL to the date of SPTL’s invoice at 2% over Base Rate from time to time and for the time being;¶
 Provided that no sum shall be due in respect of Abortive Works in respect of fees, expenses and costs associated with (i) seven year statement works and/ or (ii) wider transmission reinforcement works as set out in the TO Construction Agreement.

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4.5 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 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.

4.6 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.

4.7 Contestable Connection Works

Users may also elect to carry out certain contestable areas of connection works. Such arrangements would be subject to the assets being designed and installed to suitable technical standards to be agreed between SPT 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, SPTL would adopt the self-build assets free of charge and assume responsibility for their ongoing maintenance.

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Should a User wish to take advantage of the self-build option, this should be made clear in their formal application to NGET, and SPTL will work with the User to facilitate this option.

The scope of contestable works would be agreed before the application is deemed competent. Infrastructure works are non-contestable to avoid any potential impact on other customers.

SPT will charge the User on an indicative basis for any non contestable items such as design approval, inspection and testing of the contestable works to establish that the assets are suitable for adoption by SPT.

The TOCO would contain an estimated GAV for the new or replacement connection assets for charging purposes. The GAV would be estimated by SPT as though it was carrying out the full works.

4.8 Civil Engineering Costs of Connection sites

Where a substation site may accommodate infrastructure assets in one area of the building or outdoor compound, and sole-use connection assets for one or more Users in another area of the same substation site, the civil engineering costs including that share of the costs of preparing a level, drained site for the accommodation of the sole-use connection assets would be included in the connection costs.

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.

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

	Type of connection	MW	Fee (£k)
1	Directly connected generation Zone B	<300 =>300 and <1000 =>1000	21 42 63
2	Directly connected generation Zones C & D	<100 =>100 <300 =>300<500 =>500<1000 =>1000	21 31 52 84 104
3	Directly connected generation Zones E & F	<300 =>300 and <1000 =>1000	21 42 63
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	21 31
9	New Grid Supply Point Zone E	<100 =>100	13 25
10	New Grid Supply Point Zone F	<100 =>100	10 21

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Notes

* A fee of one third of the Modification Application fee shown is required in respect of a request for a Statement of Works for Embedded Generation Connections. Should the Statement of Works show that Transmission Works are triggered by the connection, a Modification Application will be required, and the balance of the application fee will be payable.

It is also possible that a statement of works may need to be requested even where the proposed generator capacity is under 30MW

The MW value is the final value applied for.

No application fee is payable for TO initiated works.

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

	Type of Connection	MW *	Fee (£k)
1	Directly Connected Generation Zone B	<300 =>300 and <1000 =>1000	21 42 63
2	Directly Connected Generation Zones C & D	<100 =>100 <300 =>300<500 =>500<1000 =>1000	21 31 52 84 104
3	Directly Connected generation Zones E & F	<300 =>300 and <1000 =>1000	21 42 63
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	21
8	Modifications to alter connection commissioning dates	All	5

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* A fee of one third of the Modification Application fee shown is required in respect of a request for a Statement of Works for Embedded Generation Connections. Should the Statement of Works show that Transmission Works are triggered by the connection, a Modification Application will be required, and the balance of the application fee will be payable.

It is also possible that a statement of works may need to be requested even where the proposed generator capacity is under 30MW

MW value is the final value being applied for

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

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Appendix C SPT Engineering Rates

<i>Grade</i>	<i>Rate (£/day)</i>	
Section Manager or Internal Solicitor	790	Deleted: 760
Principal PowerSystems Engineer	660	Deleted: 630
Senior PowerSystems Engineer, Project Manager or Senior Wayleave Officer	550	Deleted: 530
PS Engineer or Draughtsman	440	Deleted: 420
Graduate Engineer	370	Deleted: 350
Admin support	290	Deleted: 280

All fees are subject to the addition of VAT.

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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:

Description	£k			Formatted Table
	275kV	132kV	33kV	
	Charge	Charge	Charge	
Single Busbar bay	870	530	-	Deleted: 900
Double Busbar bay	1032	620	-	Deleted: 600
				Deleted: 1400
				Deleted: 700
Transformer cables, Per 100m (inc sealing ends)	-	260	150	Deleted: 90
				Deleted: 70
275/132kV 240MVA transformer	2086	-	-	Deleted: 1700
275/33kV 120MVA transformer	1827	-	-	Deleted: 200
132/33kV 90MVA transformer	-	779	-	Deleted: 00
132/33kV 30 MVA transformer	-	610	-	Deleted: 500

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Glossary of terms

Abortive Works

Works undertaken by SPT that are no longer required due to a required change to the specification of the transmission construction works .

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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 Costs

The costs, including overheads, of constructing the connection

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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

National Grid Electricity Transmission plc acting as the Great Britain System Operator

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Price Control

As set out in SPT's licence.

Pre-Vesting

Means on or before 31 March 1990

Post-Vesting

Means after 31 March 1990

SO

System Operator

STC

The System Operator / Transmission Owner Code

TO

Transmission Owner

TOT

Allowed Transmission Owner Revenue - as set out in SPT's licence

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Termination Amount

On termination, an amount to recover the Net Asset Value of the connection assets plus the cost of removing the

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connection assets if required.**User**

A generation or demand customer connected to SPT's transmission system and party to NGET's bilateral agreement(s).

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

Effective 1 April ~~2008~~2008

The Gas and Electricity Markets Authority have approved this statement on 1 April 200~~8~~7

Scottish Hydro Electric Transmission Ltd.

Registered office:

Inveralmond House

200 Dunkeld Road

Perth

PH1 3AQ

Registered No: 213460

Price: £5

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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 NGET (GBSO) of transmission services as specified in the System Operator Transmission Owner Code (STC). This Statement is effective from 1 April 2008⁷. The charges shall consist of General System Charge, Site Specific Charges and other charges as set out below.

Introduction

SHETL is obliged, under Special Condition J~~102~~ 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 NGET to make a reasonable estimate of the charges to which it would become liable for the provision of SHETL's services. Special Condition J~~102~~ 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 NGET by invoicing NGET 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 NGET carry out other work, which is not covered by General System Charge 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 Charge

The **General System Charge** reflects 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 Charge** 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 NGET'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 NGET.

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 NGET.

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 6.65%. 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, SHETL will recover the cost of connection from NGET 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 NGET 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 NGET'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 NGET's formal application for a connection, SHETL will submit an indicative price offer within three months of the effective application date. When 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.

NGET 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 NGET is not the same choice being exercised by the party requesting the connection ("the User") in its relationship with NGET.

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

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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 NGET 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 NGET 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 6.65%. 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 NGET 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 the cost will be recovered as a Site Specific charge.

Where a modification to the existing connection occurs at NGET's request or due to developments to the transmission system, their connection charges reflect any additional connection assets that are necessary to meet NGET'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 charges 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:

- 1. A proportion of the cost of operating the transmission business;
- 2. total site care, covering site safety, security and environmental protection, local liaison, notably with statutory authorities, wayleave grantors and members of the public;
- 3. payment of local authority charges, electricity, water and telephone charges associated with the connection site;
- 4. 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,

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

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

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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

Over and above the General System Charge 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 NGET's request

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

Application Fees

SHETL will charge NGET 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.

NGET 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 NGET chooses to pay a variable application fee, SHETL will charge NGET 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 NGET notify SHETL of changes in the planning assumptions after receipt of an application fee, SHETL may levy an additional charge.

In exceptional circumstances where NGET 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 NGET, 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 NGET'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).

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Feasibility Studies

If NGET 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 NGET 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 NGET's request, irrespective of whether the cost can be capitalised
- Termination charge associated with the write-off of connection assets at the connection site.

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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.

The costs of abortive transmission construction works will be recovered as one-off charge as set out in this statement.

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

Miscellaneous site specific charges

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

Abortive Works charges

Following a User's modification application, if in SHETL's reasonable opinion, the User has required SHETL to make the amendment to the transmission construction works and SHETL has previously carried out transmission construction works some or all of which are now no longer required ("Abortive Works"), NGET shall be required to make a payment to SHETL in respect of all fees, expenses and costs of whatever nature reasonably and properly incurred by SHETL in respect of the Abortive Works for which SHETL is responsible or may otherwise become liable in respect of the Abortive Works.

Miscellaneous site specific charges

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

Contestable Connection Works

The above principles are relevant for transmission connections where SHETL procures and installs all necessary transmission connection assets on behalf of the User. However, it is also possible for the User themselves to procure and install certain transmission connection assets as contestable connection works. Such arrangements would be subject to the assets being designed and installed to SHETL's technical standards to ensure the ongoing security and operability of the transmission system. SHETL may also require other agreements and indemnities to mitigate any undesirable consequences for other Users of the transmission system that may arise as a result of a User's decision to "self-build".

We advise that SHETL's self-build arrangements are under development and are subject to modification to reflect the requirements of a particular self-build scheme. In the event a User should wish to consider the option of their self-building certain transmission connection assets and works, they should advise NGET of this intention when making their formal application to NGET. Following such indication of intent SHETL provide the User with the necessary specifications and agreements covering the self build works.

SHETL would adopt the User's self-build transmission connection assets, free of charge, subject to the User complying with the requirements and obligations of a Transmission

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Adoption Agreement ("TAA") in respect of the transmission connection assets and other requirements. The TAA shall be between SHETL and the User .

Energy Metering Systems

The charges to NGET 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

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Outage Services charges

Where prearranged outages are rearranged at NGET's request or where NGET require additional services for planned or unplanned outages over and above the normal service provided under General System Charge, NGET will be liable for outage service charges. These charges reflect the costs incurred by SHETL in accommodating NGET'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 NGET'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.

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Where an outage is rearranged at NGET's request, SHETL will use all reasonable endeavours to minimise the charge to NGET 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 NGET 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 NGET to comply with the terms of their relevant agreement, or carried out at the request of NGET will be at the expense of NGET.

Where it becomes necessary to disconnect a customer (at the request of NGET), 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 NGET 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 NGET'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 NGET. 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 NGET requires SHETL to remove them, the cost of removal, will be payable by NGET. All such equipment will remain the property of SHETL until otherwise agreed in writing with SHETL.

Termination charge

Where NGET 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 NGET plus all reasonable costs associated with removal of the assets.

The Termination charge payable by NGET 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, NGET 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 Charges will have become payable in respect of such assets by NGET 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

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The calculation of Termination charge 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 NGET prior to completion of the works then, in addition to the costs incurred at the time of termination for connection assets, NGET 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 NGET's application for a connection as included in Appendix H1.

Miscellaneous charges

If NGET request any other work by SHETL not covered by General System Charge, Site Specific Charges 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

Bilateral Connection Agreement – agreement between NGET 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 NGET and SHETL pursuant to the STC.

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

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.

STC is the System Operator Transmission Owner Code

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 NGET'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	9 4535	5 6045	3 760	20 50
Double Busbar bay	10 901 05	6 3045	4 100	2 435
Single circuit Trident £/km	—	1 8570	—	—
Double circuit Steel Tower £/km	12 609 5	4 9051 0	—	—
Transformer Cables per km (inc terminations)	1 7956 80	7 7086 5	4 4000	2 650
275/132kV 240MVA transformer	25 600	14 350 0 12 650 11 650		
275/33kV 120MVA transformer	21 500			
132/33kV 90MVA transformer				
132/33kV 30 MVA transformer				
132/11kV 30 MVA transformer				

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.

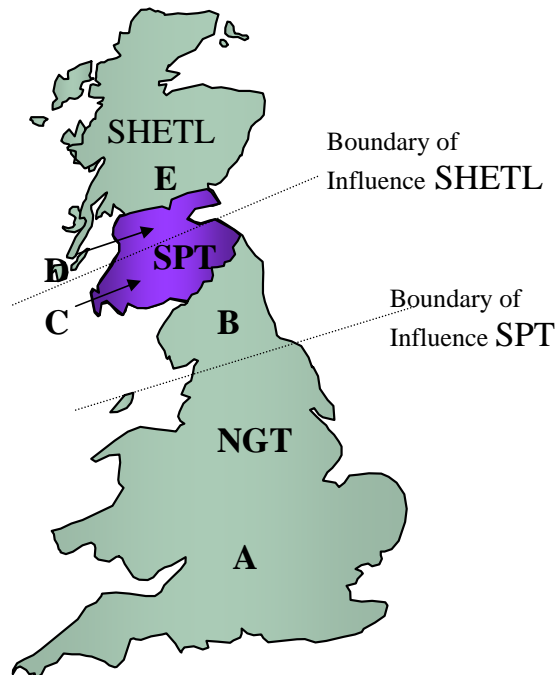
Illustrative list of Abnormal Services which may be reflected in the Site Specific Charges

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 NGET.

All fees are subject to the addition of VAT.

No application fee is payable for SHETL initiated works.

The MW value is the final value applied for.

Table A – Fixed prices for new bilateral agreements

	Connection Application Type & Zone	MW	Fee (£000)
1A	Directly Connected generation Zone E (Host SHETL, Affected SPT)	<100 =>100 <300 =>300<500 =>500<1000 =>1000	20 40 75 100 130
1B	Directly Connected generation Zone D (Affected SHETL, Host SPT)	<100 =>100 <300 =>300<500 =>500<1000 =>1000	10 20 35 50 70
2	Directly connected reactive only Zone E and Zone D		10
3	Embedded Generation (BEGA/BELLA) Zone E and Zone D⁽¹⁾	<10 =>10	3 5
4A	New Supply point Zone E (Host SHETL, Affected SPT)	<100 =>100	20 40
4B	New Supply point Zone D (Affected SHETL, host SPT)	<100 =>100	10 20

Table B – Fixed prices for modifications to existing bilateral agreements

	Connection Application Type & Zone	MW	Fee (£000)
5A	Directly Connected generation Zone E (Host SHETL, Affected SPT)	<100 =>100 <300 =>300<500 =>500<1000 =>1000	20 40 75 100 130
5B	Directly Connected generation Zone D (Affected SHETL, Host SPT)	<100 =>100 <300 =>300<500 =>500<1000 =>1000	10 20 35 50 70
6A	Addition/reduction of a transformer at existing supply point Zone E (Host SHETL, Affected SPT)		10
6B	Addition/reduction of a transformer at existing connection point Zone D (Affected SHETL, host SPT)		5
7A	Modifications to existing supply points and agreements Zone E (Host SHETL, Affected SPT)	<100 =>100	15 20

7B	Modifications to existing supply points and agreements Zone D (Affected SHETL, host SPT)	<100 =>100	7 10
8	Modifications to alter connection/commissioning dates Zone E and Zone D		7
9	Increase in Transmission entry capacity Zone E and Zone D		7
10 A	Embedded Generation: Request for a Statement of Works at existing supply point. Zone E (Host SHETL, Affected SPT) (2)	<10	5
10 B	Embedded Generation: Modification Application following a Request for a Statement of Works . Zone E (Host SHETL, Affected SPT) (2)	<10	10
11 A	Embedded Generation: Request for a Statement of Works at existing supply point. Zone D (Affected SHETL, host SPT) (2)	<10	2
11 B	Embedded Generation: Modification Application following a Request for a Statement of Works . Zone D (Affected SHETL, host SPT) (2)	<10	5

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

Note: (1) SHETL will inform only whether there are any transmission system works required and will not produce any formal offer of terms. In the event SHETL's information show that transmission works are required by the embedded distribution connection, NGET will need to submit a formal Application.

(2) SHETL will provide a Statement of Works which will inform only whether there are any transmission system works required and will not produce any formal offer of terms. In the event SHETL's Statement of Works show that the transmission works are required by the embedded distribution connection, NGET will need to submit a formal Modification Application. For Large embedded generators (=>10MW) the fee shown in item 3, Table A is applicable.

APPENDIX 3 CHARGE-OUT RATES

Grade	Rate (£/day)
Section manager or Internal Solicitor	7 <u>7</u> 40
Principal Power Systems Engineer	6 <u>4</u> 5 <u>2</u> 0
Senior Power Systems Engineer, Project Manager or Senior Wayleave Officer	5 <u>3</u> 1 <u>5</u>
PS Engineer or Draughtsman	4 <u>2</u> 5 <u>1</u> 0
Graduate Engineer	3 <u>5</u> 5 <u>4</u> 0
Craftsman (linesman, cable jointer, substation fitter)	3 <u>1</u> 0 <u>5</u>
Admin support	2 <u>8</u> 7 <u>0</u>

All fees are subject to the addition of VAT.