



# SP Transmission & Distribution

Grant McEachran  
Office of Gas and Electricity Markets (OFGEM)  
2nd Floor, Regent Court  
70 West Regent Street  
Glasgow  
G2 2QZ

Your ref

Our ref

Date

29 January 2007

Contact/Extension

Jim McCulloch  
01698 -413492

Dear Grant

## Modifications to SPT Transmission Charging Statement

I enclose for your consideration a revised SPT Transmission Charging Statement to apply from 1<sup>st</sup> April 2007, which has been reviewed as required by Special Licence Condition J2.

For ease of following the modifications from the current published statement, the changes have been made in blue ink.

Should you have any queries on the draft statement you would like to discuss, we would be happy to meet with you.

I look forward to hearing from you.

Yours sincerely

Scott Mathieson  
**Regulation Director**

Members of the ScottishPower group

New Alderston House Dove Wynd Strathclyde Business Park Bellshill ML4 3FF  
Telephone (01698) 413000 Fax (01698) 413053



SP Transmission & Distribution

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

**CHARGES APPLICABLE FROM 1 APRIL 2006<sup>7</sup>**

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**THIS DRAFT STATEMENT HAS BEEN SUBMITTED FOR  
APPROVAL TO 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 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.

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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<sub>t</sub> and TSPN<sub>t</sub> in respect of year t by 1<sup>st</sup> November of year t-1, where:

TSP<sub>t</sub> means an amount no more than TR<sub>t</sub>-Bit (Maximum allowable revenue less BETTA implementation costs) and

TSPN<sub>t</sub> 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

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

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

Asset Age = Age at 1<sup>st</sup> April each year, rounded up to the nearest year

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

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

\*\* NAV is based on the revalued GAV\*



\*\*\* Return = a reasonable rate of return (normally ~~8.9%~~ 6.87%, 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%~~ 6.87% 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 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 fixed 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.<sup>1</sup>

### 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<sub>n</sub> = C<sub>n</sub> + NAV + R where:

C<sub>n</sub> = 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:

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<sup>1</sup> This proposal was the subject of a consultation in April 2005, which was not vetoed by OFGEM.



- 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.

### **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 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.



## 4 OTHER CHARGES

### 4.1 Application Fees

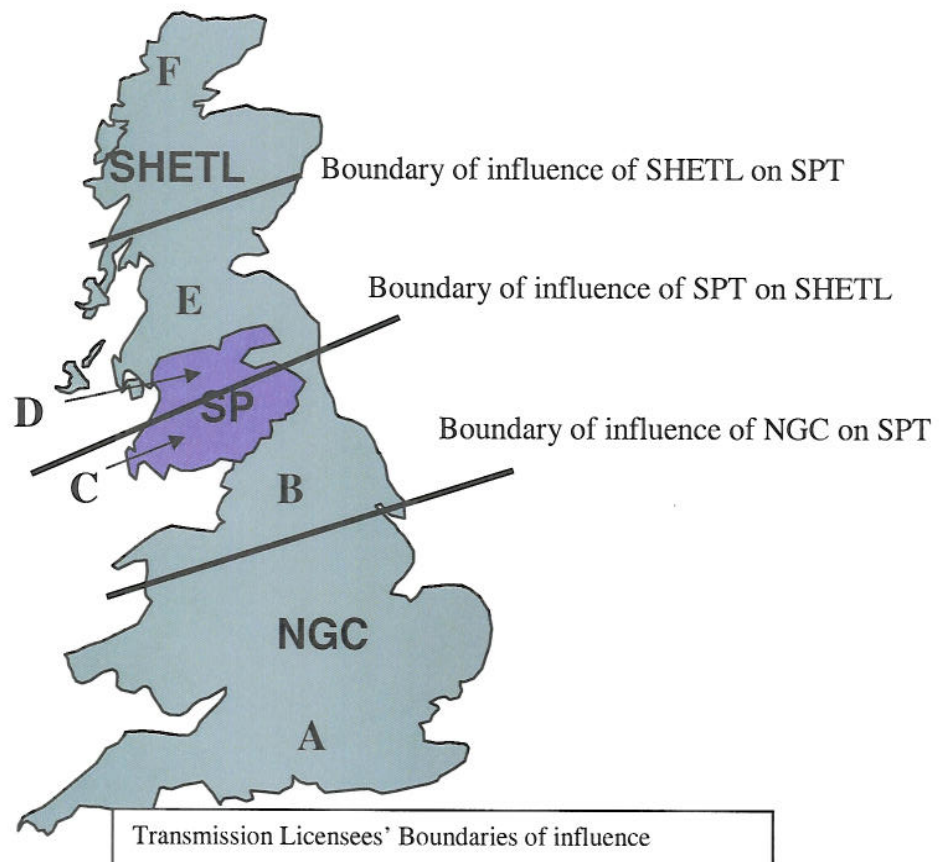
If, as a consequence of a User Application, NGET considers it may be necessary for a construction project to be undertaken in respect of such User Application, and it submits a Construction Application to SPT, SPT will charge NGET a fee at the time of each application.

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 costs<sup>2</sup>.

#### **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

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<sup>2</sup> 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.



**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	<300	20
		=>300 and <1000	40
	Zone B	=>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	New Grid Supply Point Zone B	any	5
8	New Grid Supply Point Zones C & D	<100	20
		=>100	30
9	New Grid Supply Point Zone E	<100	12
		=>100	24
10	New Grid Supply Point Zone F	<100	10
		=>100	20

**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.



**Appendix B – Fixed-prices for NGET Construction Applications for modified 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	Modifications to existing GSP Zones C&D	All	20
8	Modifications to alter connection commissioning dates	All	5

\* 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	760
Principal PowerSystems Engineer	630
Senior PowerSystems Engineer, Project Manager or Senior Wayleave Officer	530
PS Engineer or Draughtsman	420
Graduate Engineer	350
Admin support	280

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>	
	Charge	1 <sup>st</sup> Year annual charge	Charge	1 <sup>st</sup> Year annual charge	Charge	1 <sup>st</sup> Year annual charge
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**

<b>Authority</b>	The Gas and Electricity Markets Authority (Ofgem).
<b>Bilateral Connection Agreement</b>	An agreement between NGET and the User covering the connection to SPT's transmission system.
<b>Consents</b>	<p>In relation to any transmission system and or connection works: -</p> <ul style="list-style-type: none"><li>a) all such planning (including Public Inquiry) and other statutory consents; and</li><li>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</li><li>c) permission of any kind as shall be necessary for the construction of the works</li></ul>
<b>Construction Agreement</b>	An agreement entered into between the SO and TO pursuant to the Connection and Use of System Code
<b>CUSC</b>	Connection and Use of System Code
<b>NGET</b>	<a href="#">National Grid Electricity Transmission Ltd acting as the Great Britain System Operator</a>
<b>Price Control</b>	As set out in SPT's licence.
<b>Pre-Vesting</b>	Means on or before 31 March 1990
<b>SO</b>	System Operator
<b>STC</b>	The System Operator / Transmission Owner Code
<b>TO</b>	Transmission Owner
<b>TRt</b>	Total Allowed Revenue - as set out in SPT's licence
<b>User</b>	A generation or demand customer connected to SPT's transmission system and party to NGET's bilateral agreement(s).