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**Reviews of Public Electricity
Suppliers 1998 to 2000**

Scottish Transmission Price Control Review

Final Proposals

REVIEWS OF PUBLIC ELECTRICITY SUPPLIERS
1998-2000

SCOTTISH TRANSMISSION PRICE CONTROL REVIEW

FINAL PROPOSALS

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FOREWORD

This document sets out Ofgem's final proposals for revised transmission revenue controls on ScottishPower and Scottish Hydro-Electric for the five-year period commencing on 1 April 2000. It follows the publication of consultation papers in February and June 1999 and draft proposals published in October 1999. The review has taken place alongside reviews of the Public Electricity Suppliers' distribution price controls and trading arrangements for Scotland, England and Wales.

Presently the price regulated Scottish transmission businesses comprise three activities:

- a 'core' transmission activity, which is the primary owner of transmission assets other than the interconnector assets;
- a system operator activity concerned with real time despatch of generation power stations and operation of the transmission network and interconnector;
- a pre-vesting interconnector activity, comprising the ownership and operation of 850MW of capacity in existence at vesting.

The final proposals apply to all these activities jointly. The review of Scottish trading arrangements may lead to the separation of some of these activities. For example, the October consultation paper on the review of Scottish trading arrangements set out Ofgem's intention to establish a separate interconnector business and revised interconnector charges by April 2000. Before separation takes place, it will be appropriate to consider the regulatory requirements for each of these activities separately. If ScottishPower and Scottish Hydro-Electric do not accept the proposals that are put forward at that time, it will be necessary to make a reference to the Competition Commission.

Previous controls for the Scottish transmission businesses have taken the form of an RPI-X unit price control with provision for adjustment for over- and under-recovery by reference to previously projected quantities of units transmitted. Adjusted revenues did not vary with the actual volumes of units transmitted. The controls were therefore tantamount to revenue caps. Ofgem considers that the revised price controls to apply from 1 April 2000 should be expressed as RPI-X revenue controls so that unit prices will vary according to the actual quantities transmitted.

In carrying out the price control review Ofgem has taken advice from a range of consultants and advisers. Pannell Kerr Forster (PKF) has assisted with the analysis of operating costs while PB Power has worked on the analysis of

capital expenditure. A senior industrial adviser, Peter Warry, has also given advice in relation to these matters and KPMG, a firm of accountants, has audited the financial model which was used as part of the price control process.

The proposals presented here take account of the companies' written responses. A full list of respondents to the October draft proposals paper is presented in Annex 1. Having taken respondents' views into consideration the proposals have been set so as to support the transmission licensees in the achievement of their statutory duty to develop and maintain an efficient, co-ordinated and economical transmission system. The Director General's statutory duties are outlined in Section 3 of the Electricity Act 1989 and these have been applied in reviewing the price controls.

ScottishPower and Scottish Hydro-Electric have until 20 December to decide whether to accept these proposals. If ScottishPower or Scottish Hydro-Electric do not accept these final proposals then it will be necessary to make a reference to the Competition Commission, which will consider these matters and report in due course. If a reference is necessary, and it appears that the Competition Commission will not be in a position to make recommendations in time to allow licences to be modified from 1 April 2000, then it will be important to consider whether transitional arrangements or licence modifications would be appropriate to protect the interests of customers.

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Responses will be published by placing them in the Ofgem library.

Ofgem
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1 FORM OF CONTROL

Introduction

- 1.1 The transmission of electricity at voltages of 132 kV and above is an important part of the Scottish electricity industry. It accounts directly for about 5 per cent of a typical customer's bill and is a significant contributor to the finances of each Scottish company. It provides a link between generation and distribution and can have a significant influence on the operations and costs of these activities. The Scottish transmission businesses also include the interconnector between the Scottish and English electricity systems, which has an important bearing on the operations of, and competitive markets in, both systems. The interconnector is made up of pre and post-Vesting assets.
- 1.2 The two Scottish transmission businesses constitute effective monopolies within their designated areas. In order to protect customers from the potential abuse of monopoly power each transmission business is subject to controls on the prices it can charge. At present, the price regulated transmission businesses include the 'core' transmission business, the system operator and the pre-Vesting interconnector. It excludes the post-Vesting interconnector activity.
- 1.3 The key objective of this price control review is to strengthen the incentives on the companies to increase efficiency and reduce costs. At the same time it is recognised that sufficient revenue must be raised to maintain appropriate levels of network performance, to finance required new investment and to allow an appropriate return on capital employed.

Type of Control

- 1.4 At present each Scottish transmission business is subject to an RPI-X price control, with maximum prices being set to yield allowable revenues on the footing of pre-set projections of the number of units transmitted. Any over- or under-recovery of revenues resulting from variances in actual quantities transmitted is corrected for in the allowed prices for the subsequent year. This is effectively a revenue control expressed as a price control.
- 1.5 Under the present price control arrangements some customers have observed a path of increasing prices notwithstanding a positive X value in the RPI-X price control. This is because outturn units were less than the pre-set units on which the control was based. This arose, at least in part, from lower than expected levels of units transmitted to, and across,

the interconnector following delays in the proposed upgrading of the interconnector to a capacity of 2200 MW.

- 1.6 In the draft proposals, Ofgem proposed revised price controls based on projected annual growth in units of 2 per cent per annum. Under those proposals prices would have been reduced initially by 13 per cent for ScottishPower and 6 per cent for Scottish Hydro-Electric, and thereafter by RPI-1 in each subsequent year of the control for both companies, subject to adjustments for variances in actual growth in units transmitted compared to the 2 per cent assumption. The draft proposals paper also discussed the possibility of moving to a revenue control. Such a move was generally supported by respondents to the draft proposals.
- 1.7 Ofgem therefore proposes a revised form of control to apply from 1 April 2000. Under the revised control, allowed revenue will be set initially for ScottishPower and for Scottish Hydro-Electric and adjusted by RPI-X in each subsequent year of the control with an annual correction for under- and over-recovery in any previous year. The X-value will be set at zero so that allowable revenues will not rise in real terms. The lower value of X, compared to the draft proposals, is off-set by reductions in the initial level of allowed revenue as compared to those that would have been yielded by the draft price control proposals. Customers should then observe per unit prices decreasing over the control period to the extent that there is a positive growth in overall units transmitted.
- 1.8 Ofgem has also started a review of the information which it receives from price-regulated companies and the incentives which the framework of RPI-X regulation creates. In particular, it is intending to give clearer incentives in respect of quality of supply with the introduction of additional mechanisms to be applied to the distribution businesses in 2002/03. Where appropriate, Ofgem will consider whether similar mechanisms should be introduced to transmission in Scotland. If Ofgem were to put forward such proposals and the companies did not accept them, they would need to be referred to the Competition Commission.

Scope

- 1.9 The present transmission price control covers all charges made by the Scottish transmission businesses except those for rental charges to the telecommunications business, connection charges to extra high voltage (EHV) customers, entry connection charges for generators and revenues in respect of the use of the post-Vesting interconnector upgrades and pre-Vesting interconnector revenue under contract.

- 1.10 Rental revenue from the use of transmission network assets by the telecommunications business is presently excluded revenue and will continue to be so under the revised transmission control. In the draft proposals, the revenues taken to accrue to the regulated businesses from this source were £0.9m and £0.7m for ScottishPower and Scottish Hydro-Electric respectively. These revenues have been adjusted to £0.5m and £0.1m in 1997/98 prices in the light of better information about the market price for leasing fibre optics and to reflect their level of usage.
- 1.11 In Scotland, at present, transmission revenue from EHV connection charges is excluded from the regulated revenue. This arrangement will continue for the duration of the next transmission control period. In the draft proposals, EHV connections assets were added to the asset base and the annuitised revenue stream treated as offsetting excluded service revenue. Additional information supplied by ScottishPower means that in the final proposals, it has been possible to remove the EHV connection assets from the asset base and the annuitised revenue stream has therefore been excluded from the calculation of regulated revenue. This is consistent with the approach adopted in setting the present price control.
- 1.12 Revenue from the connection of generators to the Scottish system is excluded from the regulated revenue. The proposals are made on the basis that the present connection policy for generators is retained.
- 1.13 The post-Vesting interconnector is not part of the present control or the control covered by these final proposals. As part of the price control calculation set out in Annex 3, ScottishPower's excluded service revenue includes £4.1 million per year (in 1997/98 prices) to account for the sum recovered under contract from Scottish Hydro-Electric's use of the pre-Vesting interconnector.

Duration

- 1.14 A single control is proposed for a five-year period commencing 1 April 2000.

Separation

- 1.15 Separation of the interconnector and system operator activities from 'core' transmission is expected to take place within the first few years of the control as part of the reform of Scottish trading arrangements. The allowable revenue of the separate activities will be reviewed at the time leading up to the separation. The regulatory controls that will be

proposed for the separated activities will be referable to the Competition Commission if not accepted by the companies. It is Ofgem's intention that the attributable costs allowed in setting the controls in this paper should be taken into consideration in separating out the activities and in setting subsequent regulatory controls for each of them. These costs are set out in Annex 2. Issues for consideration at the time of separation will include the treatment of costs and savings arising from the introduction of these new arrangements; and whether better or more up-to-date cost information on the relevant activities is available.

2 OPERATING COSTS

Introduction

- 2.1 Transmission business spending can be broken down into capital costs and operating costs. Capital expenditure covers spending on assets, such as transformers or switchgear, the benefits of which would be expected to last over several years. Operating expenditure covers the day-to-day costs of running the network, such as repairs and maintenance, planning, overheads, system control, interconnector charges and transmission system business rates.
- 2.2 The level of regulated revenue includes an allowance for operating costs. These operating costs have been reviewed in respect of the three activities of 'core' transmission, system operator and pre-Vesting interconnector. The approach used to assess the level of operating costs was discussed in the October draft proposals paper together with an indication of operating cost levels for the next control period.

Proposals

- 2.3 The draft proposals made allowance for average annual total operating costs of £32.1 million and £17.9 million for ScottishPower and Scottish Hydro-Electric respectively. The draft proposals made an additional allowance for average annual non-operational expenditure of £1.2 million per company.
- 2.4 Ofgem and its consultants, PKF, have reviewed the responses to the draft proposals and have revised the level of operating costs for the final proposals.
- 2.5 Table 2.1 shows the operating costs and non-operational expenditures proposed for ScottishPower and Scottish Hydro-Electric for the final proposals. Total costs comprise direct operating costs, formula rates, pre-Vesting interconnector contract costs, non-operational expenditure and one-off costs. A breakdown of the costs by the three activities of 'core' transmission, system operator and pre-Vesting interconnector is included in Annex 2.
- 2.6 In the draft proposals, the annual average direct operating costs were £16.0 million and £5.6 million for ScottishPower and Scottish Hydro-Electric respectively. For the final proposals a net increase of £0.4 million is made for ScottishPower to the average annual direct operating costs, principally to account for an adjustment in base year costs of 'core' transmission. For Scottish Hydro-Electric a net increase of £0.4 million is made to the average annual direct operating costs, principally for the costs of interconnector administration.

2.7 The draft proposals included one-off allowances of £0.5 million and £0.3 million for ScottishPower and Scottish Hydro-Electric respectively for implementation of efficiency saving initiatives. For the final proposals the figure for ScottishPower has been revised to £0.9 million to make an appropriate allowance for the costs of implementing the efficiency saving initiatives.

TABLE 2.1: PROJECTION OF TOTAL OPERATING COSTS AND NON-OPERATIONAL EXPENDITURE PROVISION FOR 2000/01 TO 2004/05 (1997/98 PRICES £MILLION)

Company	Year				
	00/01	01/02	02/03	03/04	04/05
ScottishPower					
Direct operating costs	17.1	16.8	16.4	16.1	15.8
Business rates	9.7	9.4	9.3	9.3	9.3
Contract costs	6.2	6.2	6.2	6.2	6.2
Non operational	1.2	1.2	1.2	1.2	1.2
One off allowance	0.9	-	-	-	-
Total	35.1	33.6	33.1	32.8	32.5
Scottish Hydro-Electric					
Direct operating costs	6.3	6.2	6.0	5.9	5.8
Business rates	3.3	3.2	3.1	3.1	3.1
Contract costs	8.9	8.9	8.9	8.9	8.9
Non-operational	1.2	1.2	1.2	1.2	1.2
One off allowance	0.3	-	-	-	-
Total	20.0	19.5	19.2	19.1	19.0

2.8 The draft proposals also indicated that the Scottish Executive was reviewing the level of formula rates for introduction from April 2000. This review in Scotland is expected to be completed later in December. The formula rates of the regulated activities in 1997/98 were £9.9 million for ScottishPower (apportioned £9.6 million to the 'core' transmission business and £0.3 million to the pre-Vesting interconnector business) and £3.4 million for Scottish Hydro-Electric. Provisional figures for the level of formula rates for the Scottish transmission businesses suggest that they will be lower for the period 2000/01 to 2004/05 than in 1997/98. For these proposals the formula rates are assumed to reduce by 7 per cent and 10 per cent for ScottishPower and Scottish Hydro-Electric respectively, and be phased in at a maximum rate of 2.5 per cent per year. Since the final outcome of the rate review will be known before 1 April, Ofgem proposes to revise the regulated revenue for the period April 2000 to March 2005 to reflect the outcome.

- 2.9 In the draft proposals, the contract costs for the pre-Vesting interconnector were taken to be £6.1 million and £8.9 million for ScottishPower and Scottish Hydro-Electric respectively. For the final proposals the figure for ScottishPower has been revised to £6.2 million to reflect the same availability of the interconnector as that assumed for Scottish Hydro-Electric.
- 2.10 In the draft proposals, the allowance for non-operational expenditure was £1.2 million per year for each company and this is retained for the final proposals.
- 2.11 The projections of average operating costs in 1997/98 prices, shown in Table 2.1, are similar to the outturn figures of 1997/98. For ScottishPower the projected average operating costs (excluding non-operational expenditure) are £32 million, compared with an outturn of £33 million in 1997/98. For Scottish Hydro-Electric the projected average operating costs (excluding non-operational expenditure) are £18 million, compared with an outturn of £17 million in 1997/98. The projection of annual non-operational expenditure is £1.2 million per year for both companies.
- 2.12 While the companies have indicated some upward pressures on costs, Ofgem considers these to be offset by efficiency savings that may be achieved without jeopardising network performance and this is reflected in the allowed levels of operating costs.

3 CAPITAL EXPENDITURE

Introduction

- 3.1 The capital expenditure for each company has been set in these final proposals at a level which is consistent with the aim of ensuring appropriate levels of network performance at least overall cost and thus incentivising capital efficiency.
- 3.2 The level of regulated revenue includes an allowed level of capital expenditure, primarily relating to the 'core' transmission activity. The approach used to assess the level of capital expenditure was discussed in the October draft proposals paper together with an indication of capital expenditure levels for the next control period.

Proposals

- 3.3 The draft proposals made allowances for net capital expenditure for the five-year period of £124.1 million and £60.1 million for ScottishPower and Scottish Hydro-Electric respectively.
- 3.4 The figure for ScottishPower was £59.4 million less than that proposed by the company. Of this amount, £30.2 million related to non-load related expenditure in excess of that required to maintain the network and £19.2 million to load related expenditure that Ofgem considered had not been adequately justified by ScottishPower for inclusion as capital expenditure to add to the regulatory asset base. The figure for Scottish Hydro-Electric of £60.1 million compared to the company's projection of £60.8 million.
- 3.5 Ofgem and its consultants, PB Power, have reviewed the responses to the draft proposals and revised the level of capital expenditure costs for the final proposals. In particular, Ofgem and its consultants have received further submissions relating to two of ScottishPower's proposed load-related expenditure schemes. These relate to proposed reinforcements in the Borders and Galloway and in Ayrshire. Following this review, Ofgem considers it appropriate to include additional expenditure of £4.2 million for ScottishPower.
- 3.6 Table 3.1 shows the capital expenditure allowances used in determining the final proposals. The net capital expenditures proposed for ScottishPower and Scottish Hydro-Electric for the five-year period beginning April 2000 are £128.4 million and £60.0 million respectively.

TABLE 3.1 TRANSMISSION NET CAPITAL EXPENDITURE FROM 2000/01 TO 2004/05 (1997/98 PRICES £MILLION)

Company	Year					Total
	00/01	01/02	02/03	03/04	04/05	
ScottishPower	22.3	21.6	21.7	31.7	31.1	128.4
Scottish Hydro-Electric	12.7	12.5	11.8	11.1	11.9	60.0

3.7 ScottishPower has questioned whether the capital expenditure that it has proposed but not included in the setting of the control will be included in the regulatory asset base at the time of the next price control review should the capital expenditure proceed. If the capital expenditure is made by ScottishPower in the next control period, Ofgem would expect to review its treatment at the time of the next review to be satisfied that any such expenditure was necessary and efficiently carried out.

4 FINANCIAL ISSUES

Introduction

- 4.1 Since publication of the draft proposals in October, Ofgem has revisited the cost of capital for both transmission businesses and revised the opening regulatory asset value for ScottishPower.

Proposals

- 4.2 The cost of capital used to set the present transmission control was 6 per cent, which was less than that for the present distribution control.
- 4.3 In the August consultation paper setting out draft proposals for revised distribution price controls the estimated cost of capital was stated to be in the range of 6.0 - 6.9 per cent, and was taken to be 6.5 per cent. The October draft proposals for the transmission price controls were based on an unchanged cost of capital assumption of 6 per cent at the lower end of the range previously proposed for distribution.
- 4.4 Since the October draft proposals, Ofgem has reviewed the case for retaining the cost of capital for Scottish transmission below that for distribution. While the components of cost have reduced since setting the present control, as reflected in the cost of capital estimate used for distribution (see the Distribution Price Control Review - Final Proposals published December 1999), the recent reversal of the downward trend in gilt yields suggests that it is appropriate to take a more cautious view about long-term trends in the cost of capital. Furthermore, no conclusive evidence has been found for the cost of capital for regional transmission to differ from that for distribution. The transmission controls from April 2000 have therefore been set on the basis of a cost of capital of 6.5 per cent, in line with the final distribution price control proposals.
- 4.5 The draft proposals paper set out the values for the regulatory asset base derived from the CCA net book value at flotation, updated for outturn capital expenditure and depreciation since flotation on a cash flow basis. An adjustment for the telecommunications business was made to Scottish Hydro-Electric's asset base. The asset value for ScottishPower has been amended since the draft proposals to take account of the adjustments made to the capital expenditure for connections, discussed in Chapter 1. Otherwise the values in the draft proposals have been retained for these proposals. Table 4.1 shows the opening asset value for 2000/01.

TABLE 4.1 OPENING ASSET VALUE FOR 2000/01 OF 'CORE' TRANSMISSION, SYSTEM OPERATOR AND PRE-VESTING INTERCONNECTOR (£MILLION 1997/98 PRICES)

Company	Opening Net Asset Value for 1990/91	Plus capital expenditure	Less depreciation allowance	Less telecoms adjustment	Opening Net Asset Value for 2000/01
ScottishPower	732.8	216.7	390.4	-	559.1
Scottish Hydro-Electric	192.1	151.7	100.2	21.5	222.1

4.6 The draft proposals paper also indicated financial checks that would be made on each company's overall financial position from the introduction of the proposals. These checks have been made and showed the proposals to have a negligible impact on the financial ratios of the company.

5 PRICE CONTROL CALCULATIONS

Introduction

5.1 The level of regulated revenue, sufficient to finance an efficient business, is set on the basis of the individual cost components discussed in the preceding chapters. These include projections of efficient operating and capital expenditures, a path of regulatory asset values and an appropriate rate of return equal to the estimated cost of capital.

Proposal

5.2 The proposal is for an RPI-X revenue control for five years with an X value of zero. An allowance has been made for formula rates which will be revised following completion of the review by the Scottish Executive later in December, for inclusion in the finalised modifications to licences for the next transmission control.

5.3 The average levels of efficient operating costs for transmission from 2000/01 to 2004/05 are similar in real terms to the level in 1997/98. In general the identified efficiency savings of about 10-15 per cent of controllable costs are offset by increased costs relating to the introduction of other functions to transmission (e.g. the transfer of system operator costs from the generation wholesale business to the transmission business by ScottishPower).

5.4 The levels of capital expenditure relate to the 'core' transmission business. For Scottish Hydro-Electric Ofgem's proposed net expenditure is similar to that proposed by the company. For ScottishPower, Ofgem's proposed net expenditure is about 30 per cent less than that proposed by the company.

5.5 The weighted average cost of capital is taken to be 6.5 per cent. The opening asset value in 2000/01 for ScottishPower is £559 million and for Scottish Hydro-Electric is £222 million (in 1997/98 prices).

5.6 The draft proposals paper raised the possibility of introducing incentives for network performance and quality of supply, network losses and adjustments to the regulated revenue for mergers and, in the case of Scottish Hydro-Electric, for hydro benefit. The final proposals include no additional incentive schemes or other adjustments to the regulated revenue. Incentives mechanisms for transmission will be considered further as part of the work programme reviewing incentives in relation to quality of supply for distribution in 2002/03. Ofgem considers the final proposals should enable the

companies to continue to maintain and improve the performances of their networks.

- 5.7 The draft proposals assumed 2 per cent per annum growth in units transmitted and indicated initial price reductions of 13 per cent and 6 per cent for ScottishPower and Scottish Hydro-Electric with X set at 1 per cent. These would have resulted in average annual revenues during the period of the revised control of £101 million for ScottishPower and £43 million for Scottish Hydro-Electric (in 1997/98 prices). Similar levels of average annual revenue would have resulted had the draft price controls instead been based on the assumption of no growth in units transmitted and $X=0$. The final proposals are expressed as RPI-X revenue controls under which ScottishPower's maximum allowed transmission revenues will initially fall by 6 per cent and those of Scottish Hydro-Electric will remain broadly constant in real terms, followed by annual adjustments in line with the rate of change in RPI (i.e. $X=0$). The revenue control calculations are set out in Annex 3.
- 5.8 The final proposals do not explicitly include a statement of the costs and revenues for the three activities of 'core' transmission, system operator and pre-Vesting interconnector (as outlined in the draft proposals paper) because the separation of these activities may lead to changes to their respective functions. For example, it remains to be decided in which business function the interconnector administrator should reside. The levels of allowable revenue for the separated activities are to be assessed at a later date and in the period leading up to the separation, as part of the reform of Scottish trading arrangements. At that time it may be necessary to consider a number of factors including the costs and savings of:
- implementing changes from two to one system operator in Scotland;
 - implementing changes for separation of the interconnector activity and review of interconnector costs and charges; and
 - changes to the generator connection policy of Scottish Hydro-Electric.
- 5.9 Included in Annex 2 are indicative numbers on the costs of the three activities which presently make up the transmission control. This will form the starting point of any future review of the costs and revenues of the separate activities. The outcome of that future process will be referable to the Competition Commission and is separate from the proposals contained in this document which assume no separation.

5.10 Draft modifications to the licences are being prepared consistent with the proposals in this paper and will be available later in December. They will be finalised following acceptance of the proposals by the company and the outcome of the Scottish Executive's review of formula rates. These will be issued together with the licence modifications for the one-year extension for the year 1999/2000. Additional modifications to the licences may be required before April 2000 should separation of the activities be introduced with effect from that date.

ANNEX 1

LIST OF RESPONDENTS TO THE OCTOBER 1999 DRAFT PROPOSALS PAPER ON THE SCOTTISH TRANSMISSION PRICE CONTROL REVIEW

BNFL Magnox Generation
British Energy
British Gas Trading
National Grid Company
North of Scotland Electricity Consumers' Committee
PowerGen
ScottishPower
Scottish and Southern Energy
TXU Europe Power & Energy Trading
UPM (Caledonian Paper plc)

ANNEX 2

SEPARATION - DEFINITIONS AND COSTS

These proposals set a level of regulated revenue for the five-year period of the control. However, under the review of Scottish trading arrangements, the separation of some functions from the present transmission businesses is expected before the end of the proposed control period. Definitions of the separate businesses and the corresponding indicative costs for these functions are outlined below. They relate back to cost categories within the business plan questionnaire responses submitted by the companies in November 1998.

Definitions

'Core' transmission: The 'core' transmission business refers to the present transmission business, excluding the interconnector and interconnector administrative functions and the system operator function.

Pre-Vesting interconnector: The pre-Vesting interconnector has a capacity of 850 MW and consists of several hundred kilometres of line:

- a 275 kV and 400 kV transmission circuit between Strathaven and Harker;
- a 275 kV transmission circuit between Cockenzie and Stella;
- a 400 kV transmission circuit between Torness and Stella; and
- two 132 kV transmission circuits between Chapelcross and Harker.

Post-Vesting interconnector: The post-Vesting interconnector consists of the assets for upgrades of the interconnector above 850 MW.

System operator: The Scottish system operator has responsibility for the present functions of the control centres, including operational planning, scheduling, despatch, switching, safety responsibilities and real-time allocation of interconnector capacity and excluding those of the interconnector administrator.

Interconnector administrator: The interconnector administrator has responsibility for co-ordinating the commercial arrangements of electricity transfers across the interconnector and the activities of the External Pool Members (EPM), communicating declarations/re-declarations of trading block availabilities to NGC and distributing subsequent scheduling and despatch data to EPMs for implementation.

Indicative costs for the separate businesses

TABLE 1 OPERATING AND NON-OPERATIONAL EXPENDITURE

Company	Year					Total
	00/01	01/02	02/03	03/04	04/05	
'Core' transmission						
ScottishPower	24.3	22.9	22.5	22.2	22.0	113.9
Scottish Hydro Electric	8.5	8.0	7.8	7.7	7.6	39.6
System operator						
ScottishPower	2.4	2.3	2.3	2.3	2.2	11.5
Scottish Hydro Electric	1.8	1.8	1.7	1.7	1.7	8.7
Pre-Vesting interconnector						
ScottishPower	6.9	6.9	6.9	6.9	6.9	34.5
Scottish Hydro Electric	9.3	9.3	9.3	9.3	9.3	46.5
Interconnector administrator						
ScottishPower	1.5	1.5	1.4	1.4	1.4	7.2
Scottish Hydro Electric	0.4	0.4	0.4	0.4	0.4	2.0
Total						
ScottishPower	35.1	33.6	33.1	32.8	32.5	167.1
Scottish Hydro Electric	20.0	19.5	19.2	19.1	19.0	96.7

TABLE 2 CAPITAL EXPENDITURE

Company	Year					Total
	00/01	01/02	02/03	03/04	04/05	
'Core' transmission						
ScottishPower	22.3	21.6	21.7	31.7	31.1	128.4
Scottish Hydro Electric	12.7	12.5	11.8	11.1	11.9	60.0
System operator						
ScottishPower	0	0	0	0	0	0
Scottish Hydro Electric	0	0	0	0	0	0
Pre-Vesting interconnector						
ScottishPower	0	0	0	0	0	0
Scottish Hydro Electric	0	0	0	0	0	0
Interconnector administrator						
ScottishPower	0	0	0	0	0	0
Scottish Hydro Electric	0	0	0	0	0	0
Total						
ScottishPower	22.3	21.6	21.7	31.7	31.1	128.4
Scottish Hydro Electric	12.7	12.5	11.8	11.1	11.9	60.0

TABLE 3 REGULATORY ASSET VALUES

Company	Opening Net Asset Value for 1990/91	Plus capital expenditure	Less depreciation allowance	Less telecoms adjustment	Opening Net Asset Value for 2000/01
'Core' transmission					
ScottishPower	708.0	185.4	372.5	0	520.9
Scottish Hydro Electric	192.1	130.8	96.7	21.5	204.7
System operator					
ScottishPower	0	0	0	0	0
Scottish Hydro Electric	0	0	0	0	0
Pre-Vesting interconnector					
ScottishPower	24.8	31.3	17.9	0	38.2
Scottish Hydro Electric	0	20.9	3.5	0	17.4
Interconnector administrator					
ScottishPower	0	0	0	0	0
Scottish Hydro Electric	0	0	0	0	0
Total					
ScottishPower	732.8	216.7	390.4	0.0	559.1
Scottish Hydro Electric	192.1	151.7	100.2	21.5	222.1

ANNEX 3

CALCULATIONS

SCOTTISHPOWER

In 1997/98 prices

CAPEX - £M	2000/01	2001/02	2002/03	2003/04	2004/05	Total
Gross network capex	22.3	25.0	21.8	31.9	31.1	132.0
Connection charges	0.0	3.4	0.1	0.2	0.0	3.6
Net network capex	22.3	21.6	21.7	31.7	31.1	128.4

ASSET VALUE - £M	2000/01	2001/02	2002/03	2003/04	2004/05	Overall
Opening asset value	559.1	539.3	518.3	496.9	484.8	559.1
Depreciation	-42.1	-42.6	-43.2	-43.7	-44.5	-216.0
Net network capex	22.3	21.6	21.7	31.7	31.1	128.4
Closing asset values	539.3	518.3	496.9	484.8	471.4	471.4

COSTS - £M	2000/01	2001/02	2002/03	2003/04	2004/05	Total
Return	35.7	34.4	33.0	31.9	31.1	166.0
Depreciation	42.1	42.6	43.2	43.7	44.5	216.0
Operating costs	35.1	33.6	33.1	32.8	32.5	167.1
Total costs	112.9	110.6	109.3	108.4	108.1	549.3
PV of Total costs	108.3	99.7	92.5	86.2	80.7	467.3

REVENUE - £M	2000/01	2001/02	2002/03	2003/04	2004/05	Total
Price control revenue	104.4	104.4	104.4	104.4	104.4	521.9
Excluded revenue	4.6	4.6	4.6	4.6	4.6	22.9
Total revenue	109.0	109.0	109.0	109.0	109.0	544.8
PV of Total revenue	105.1	98.7	92.6	87.0	82.1	467.3

Proposed Control Arrangements	
Reduction in revenue	6%
X	0
Cost of capital	6.5%

SCOTTISH HYDRO-ELECTRIC

In 1997/98 prices

CAPEX - £M	2000/01	2001/02	2002/03	2003/04	2004/05	Total
Gross network capex	16.8	12.5	13.2	11.1	11.9	65.4
Connection charges	4.1	0.0	1.3	0.0	0.0	5.4
Net network capex	12.7	12.5	11.8	11.1	11.9	60.0

ASSET VALUE - £M	2000/01	2001/02	2002/03	2003/04	2004/05	Overall
Opening asset value	222.1	223.4	224.1	224.0	222.9	222.1
Depreciation	-11.4	-11.7	-12.0	-12.2	-12.4	-59.8
Net network capex	12.7	12.5	11.8	11.1	11.9	60.0
Closing asset values	223.4	224.1	224.0	222.9	222.3	222.3

COSTS - £M	2000/01	2001/02	2002/03	2003/04	2004/05	Total
Return	14.5	14.5	14.6	14.5	14.5	72.6
Depreciation	11.4	11.7	12.0	12.2	12.4	59.8
Operating costs	20.0	19.5	19.2	19.1	19.0	96.7
Total costs	45.9	45.8	45.7	45.8	45.9	229.1
PV of Total costs	44.1	41.2	38.7	36.4	34.2	194.6

REVENUE - £M	2000/01	2001/02	2002/03	2003/04	2004/05	Total
Price control revenue	45.3	45.3	45.3	45.3	45.3	226.4
Excluded revenue	0.1	0.1	0.1	0.1	0.1	0.5
Total revenue	45.4	45.4	45.4	45.4	45.4	226.9
PV of Total revenue	44.0	41.3	38.8	36.4	34.2	194.6

Proposed Control Arrangements	
Reduction in revenue	0%
X	0
Cost of capital	6.5%