Transmission price controls and BETTA statutory licence consultation, impact assessment, and consultation on the statements of the basis of transmission owner charges

February 2005

Summary

In September 2004 the Secretary of State put in place, amongst other things, new and amended licence conditions for electricity transmission licensees to facilitate the implementation of the British Electricity Trading and Transmission Arrangements ("BETTA"), following a process of consultation by Ofgem/DTI and the commencement of relevant powers under the Energy Act 2004. National Grid Company plc (NGC) will be system operator for all three transmission systems in GB (the GB transmission system), with existing licensees, as transmission owners, continuing to own their transmission system assets. BETTA is currently planned to 'go-live' on 1 April 2005.

In December 2004, Ofgem published its final price control proposals to apply to electricity transmission licensees from 1 April 2005. There were two reasons why Ofgem considered it necessary to propose changes to the price controls of the three transmission licensees:

- Firstly, since the current transmission price controls for SP Transmission Ltd (SPTL) and Scottish Hydro-Electric Transmission Ltd (SHETL) are intended to last until 31 March 2005, proposals were made to roll forward these price controls (excluding adjustments for BETTA) for two years to 31 March 2007 to align the price control review dates with those for other transmission licensees in both electricity and gas, enabling all transmission issues to be considered together at the next review (for 2007).

- Secondly, proposals were made for the price controls of all three transmission licensees to be adjusted from BETTA go-live to provide remuneration according to the licensees' changed roles and responsibilities under BETTA.

All three electricity transmission licensees have indicated their acceptance in principle to their respective price controls to apply from 1 April 2005.

In the December 2004 document Ofgem also published its Impact Assessments for the price control proposals and invited comments. This document re-publishes the Impact Assessment taking into account the detailed comments received. Ofgem does not consider that the revisions affect the decisions by the Authority on the price control proposals.

The December 2004 document published draft licence modifications to give effect to Ofgem's final proposals. Since December, Ofgem has continued discussions with the licensees on the detailed drafting of these modifications. Attached to this document are the notices pursuant to section 11 of the Electricity Act 1989 (the Act) that give notice of the Authority's intention to modify the licences of NGC, SPTL and SHETL.

Under BETTA, transmission owners will levy charges on NGC rather than on transmission users directly. The contractual framework to give effect to these charges and payments is provided by the System Operator-Transmission Owner Code ("STC"). In addition, the licence modifications proposed by Ofgem require transmission owners to publish a statement of the basis of the charges they would levy on NGC. The proposed licence condition requires that these statements are approved by the Authority.

In anticipation of this new licence obligation, SPTL and SHETL have provided Ofgem with draft statements (based on the draft licence conditions set out in Ofgem's final proposals and subsequent discussions) prior to submitting statements to the Authority for Approval when the relevant licence conditions come into force. These draft statements are attached to this document. Whilst views are invited on these draft statements, Ofgem does not consider it necessary to undertake an impact assessment in respect of the decision to approve or not SPTL's and SHETL's charging statement.

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1. Introduction

Structure of document and responses requested

1.1. In its December 2004 report[1], Ofgem published its final price control proposals to apply to electricity transmission licensees from 1 April 2005.

1.2. There were two reasons why Ofgem considered it necessary to propose changes to the price controls of the three transmission licensees:

- ♦ Firstly, since the current transmission price controls for SPTL and SHETL are intended to last until 31 March 2005, proposals were made to roll forward these price controls (excluding adjustments for BETTA) for two years to 31 March 2007 to align the price control review dates with those for other transmission licensees in both electricity and gas, enabling all transmission issues to be considered together at the next review (for 2007), and

- ♦ Secondly, proposals were made for the price controls of all three transmission licensees (NGC, SPTL, SHETL) to be adjusted from BETTA go-live to provide remuneration according to the licensees' changed roles and responsibilities under BETTA.

1.3. Following publication of the December 2004 report, all three transmission licensees indicated their acceptance of the price control proposals in principle. The Authority therefore proposes to implement its price control proposals by exercising its powers under Part 1 of the Electricity Act 1989, namely to modify by agreement the licences of the transmission licensees under section 11 of the Act.

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[1] Transmission price controls and BETTA: Final proposals and impact assessment, Ofgem 279/04, December 2004.

1.4. Also, Ofgem has received comments on its Impact Assessment, published as part of the December 2004 report and is republishing the Impact Assessment.

1.5. Furthermore, Ofgem has received from the transmission owners (SPTL and SHETL) draft statements of the basis of their charges to NGC and Ofgem is publishing these drafts in this document for comment.

1.6. This document covers these matters in separate chapters as follows:

- Chapter 2: statutory licence consultations in the form of notices under section 11 of the Electricity Act giving notice that Ofgem intends to modify the licences of all three transmission licensees by agreement to give effect to the changes set out in Ofgem's final proposals document.

- Chapter 3: the price control Impact Assessment

- Chapter 4: transmission owner charging statements.

1.7. The method for responding to each of the above matters is detailed separately in the chapter concerned.

STC amendments

1.8. In the December 2004 report, Ofgem consulted on amendments to the STC[2] consequential to the price control proposals. Furthermore, in January 2005 Ofgem consulted[3] on changes to Schedule 10 of the STC. Ofgem proposes to determine on both these proposed STC amendments when it determines on the section 11 notices for the transmission licensees included with this document.

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[2] The STC is the System Operator –Transmission Owner Code. The STC provides the principal contractual basis for the interactions between transmission licensees under BETTA.

[3] Conclusions on amendments to the STC and Consultation on Schedule 10 Changes, Ofgem 10/05, January 2005

2. Statutory licence consultation

2.1. As stated in the December 2004 document, Ofgem proposes to implement its final proposals for the price controls through licence modifications under the framework set out in Section 11 of the Electricity Act 1989. This includes a formal 28 day period of consultation. The section 11 notices are published as part of this document.

2.2. The section 11 notices are being published in advance of any decision by the Secretary of State on whether or not BETTA should go-live on 1 April 2005. As discussed in the December 2004 report, Ofgem needs to be in a position to implement the appropriate price control licence modifications depending on the decision of the Secretary of State.

2.3. To this end, two section 11 notices are published proposing two sets of price control licence modifications for both SPTL and SHETL as follows:

- ♦ licence modifications that will be determined by Ofgem from BETTA go-live (planned for 1 April 2005) - the BETTA proposals, and
- ♦ licence modifications that will be determined by Ofgem in the event that BETTA go-live is delayed for any reason - the roll-forward proposals[4].

2.4. By the end of the section 11 consultation period, Ofgem will know the Secretary of State's decision in respect of the BETTA go-live date and will be in a position to determine the appropriate set of licence modifications.

2.5. For NGC, only one section 11 notice is proposed. This is for the implementation of the licence modifications for the BETTA proposals, and which will be determined by Ofgem from BETTA go-live. NGC's existing licence

[4] Ofgem will consider at the appropriate time the likely length and financial impacts of any delay to BETTA go-live in deciding whether to apply the roll forward controls (absent BETTA). The delay would need to be significant for these controls to be applied.

conditions will continue to apply if BETTA go-live is delayed significantly from 1 April 2005.

2.6. The statutory licence modification consultations published as Appendices to this document are as follows:

- Appendix 1: Modifications to NGC's licence to implement the BETTA proposals
- Appendix 2: Modifications to SPTL's licence to implement the BETTA proposals
- Appendix 3: Modifications to SHETL's licence to implement the BETTA proposals
- Appendix 4: Modifications to SPTL's licence to implement the roll forward proposals (if BETTA go-live is significantly delayed)
- Appendix 5: Modifications to SHETL's licence to implement the roll forward proposals (if BETTA go-live is significantly delayed)

2.7. If the licensees formally agree to the licence modifications set out in the section 11 notices then, subject to consideration of any consultation responses, the relevant proposals can be implemented for 1 April 2005.

2.8. The method for responding to these notices is set out in each section 11 notice.

2.9. Ofgem/DTI have considered contingency arrangements that should be applied in the event that one or more licensees do not agree to the modifications set out in the section 11 notices, and are issuing a separate consultation on this matter.

Related licence changes in progress

Transmission investment for renewable generation (TIRG)

2.10. Final proposals in relation to transmission investment for renewables were published in December 2004 setting out a framework for an adjustment mechanism and efficiency incentives to fund four identified baseline projects[5] in Scotland and north of England, prior to the next price control reviews.

2.11. Ofgem is currently in the process of drafting modifications to the three transmission licences to make the adjustment mechanism effective. Part of this work includes finalising the annual estimated project costs and output measures for each baseline investment proposal with each transmission licensee. Ofgem will be shortly be publishing section 11 notices to modify all three transmission licenses in relation to these matters.

NGC System Operator incentive scheme on external costs

2.12. Initial proposals in relation to NGC's System Operator incentive scheme on external costs were published in December 2004 setting out a proposed framework for the 2005/6 GB system operator incentive scheme[6].

2.13. It is proposed to publish Ofgem's final proposals and statutory licence consultations (section 11 notices) for NGC's system operator incentive scheme to apply on a GB basis in late February 2005.

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[5] Transmission investment for renewable generation - Final proposals, Ofgem 288/04, December 2004
[6] NGC System Operator incentive scheme from April 2005 - Initial Proposals, Ofgem 280/04, December 2004

3. Impact assessment

Framework

3.1. As discussed in Chapter 1, the Authority proposes to implement its price control proposals by exercising its powers under the Electricity Act 1989, namely by modifying by agreement the licences of the transmission licensees under section 11 of the Act.

3.2. Section 5A of the Utilities Act 2000 applies where[7]:

- the Authority is proposing to do anything for the purposes of, or in connection with, the carrying out any function exercisable by it, under or by virtue of Part I of the Electricity Act 1989; and
- it appears to the Authority that it is important.

3.3. Where section 5A of the Utilities Act applies, the Authority must:

- carry out and publish and an Impact Assessment (IA); or
- publish a statement setting out the reasons that it considers that it is unnecessary for it to carry out an IA.

3.4. In light of the above, Ofgem considered it appropriate to publish in the December 2004 report the IA in relation to its conclusions on:

- the roll forward price controls for SPTL and SHETL, and
- the BETTA price controls (NGC, SPTL, SHETL)

and to seek comments.

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[7] Section 5A was inserted into the Utilities Act by section 6 the Sustainable Energy Act 2003, with effect from December 2003.

Impact Assessment

3.5. Ofgem received a response to the Impact Assessment as listed in Appendix 6. No comments were made on the impact assessment for the roll forward price controls and no changes have been made to that part of the Impact Assessment.

3.6. The respondent made a number of minor detailed comments on the impact assessment related to the BETTA price controls and Ofgem's adjustments to the issues concerned have been change marked for clarity. Ofgem does not consider that these comments affect its final price control proposals.

3.7. Nonetheless, Ofgem has modified the Impact Assessment in the light of these comments. The revised Impact Assessment (change marked against the version published in December 2004) is attached in Appendix 7.

4. Transmission owner charging statements

4.1. Under the proposed price control licence modifications for BETTA, SPTL and SHETL will be required to prepare a statement approved by the Authority setting out the basis upon which charges will be made by them to NGC for:

- transmission owner services
- connections to the licensee's transmission system, and
- outage changes.

4.2. SPTL and SHETL have provided Ofgem with draft statements and these are attached as follows:

- Appendix 8: SPTL's draft statement of the basis of charges
- Appendix 9: SHETL's draft statement of the basis of charges.

4.3. Since the charges made by transmission owners are only levied on NGC, the form of the charging statement will not have a direct impact on users and connectees. Charges to users are determined by NGC's charging methodologies and NGC's revenue restriction.

4.4. However, potentially there are indirect impacts on users to the extent that the statements of charges provide NGC with information on the nature of costs, which might subsequently be charged out to users. This is because NGC has an obligation to adjust the balance of charges where it concludes that to do so would better meet the objectives for its methodology.

4.5. An example of such differences in cost would be where the rate of return used by SPTL or SHETL in calculating site specific charges to NGC differs from the rate of return used by NGC in its connection charging methodology with users[8]. In particular, the rates of return on site-specific assets proposed by SHETL and SPTL in their transmission owner charging statements could reflect the costs of capital considered by Ofgem to be appropriate for the rest of their transmission assets.

4.6. Differences between the rates of return applied by transmission owners and the rate of return assumed by NGC reflect, at least in part, the timing mismatch between when cost of capital assumptions have been reviewed for SPTL and SHETL and for NGC[9].

4.7. In Ofgem's view, it would be inappropriate to modify a charging methodology to reflect these timing differences. Therefore, in relation to this interim period (2005/6), Ofgem proposes to make an adjustment to NGC's revenues so that any balance of revenues between the charging methodologies would be recovered from transmission users rather than connectees.

4.8. However, with a revised NGC's price control to apply from 1 April 2006, NGC will need to consider in the medium term whether and how its methodology might evolve to address any enduring costs differences.

Impact Assessment

4.9. As discussed in chapter 3, Ofgem has obligations under section 5A of the Utilities Act 2000 to carry out an impact assessment in certain circumstances which the Authority considers important.

4.10. In such circumstances, the Authority must:

- carry out and publish and an Impact Assessment (IA); or

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[8] NGC currently uses a 6.0% pa real rate of return in calculating connection charges to users, whereas the costs of capital assumed by Ofgem in setting the price controls for SPTL and SHETL in its December 2004 report were 8.9% and 8.7% respectively.
[9] The review for SPTL and SHETL was carried out in 2004, and the review for NGC was carried out in 2000 and a further review is in progress.

- publish a statement setting out the reasons that it considers that it is unnecessary for it to carry out an IA.

4.11. In considering the above, it is important to note the following:

- the charging statements describe the method by which transmission owners propose to recover the revenues under their price controls; the Impact Assessment for the price controls is attached to this document (Appendix 7).

- the main impacts are on NGC since the charging statements set out how transmission owners will recover their allowed revenues from NGC. NGC has been involved in the industry discussions on these arrangements and this consultation gives a further opportunity to express views.

4.12. As regards users, the effects of differences between transmission owner charging statements and NGC's charging statement are discussed above (paragraphs 4.4 - 4.6). The price control Impact Assessment (Appendix 7) indicates that while such differences could lead for example to a small redistribution of connection related charges from connectees to all users of the GB transmission system, these effects are considered to be small.

4.13. Given that the impacts of the transmission owner charging statements have been dealt with in another IA, Ofgem does not consider it necessary to undertake an impact assessment in respect of the decision to approve or not SPTL's and SHETL's charging statements. However, as discussed above, NGC will need to consider in the medium term whether and how its methodology might evolve to address any enduring costs differences and in such an event the requirement for an impact assessment will need to be reviewed.

Views invited

4.14. Views are invited on whether the draft statements provided by SPTL and SHETL provide sufficient clarity on the basis for transmission owner charges to NGC.

Next steps

4.15. Comments on the draft statements of the basis of charges provided by SPTL and SHETL should be sent by 22 March 2005 to:

David Halldearn
BETTA Project
Office of Gas and Electricity Markets (Ofgem)
9 Millbank
London
SW1P 3GE

Please e-mail comments to BETTA.consultationresponse@ofgem.gov.uk marked 'Transmission price controls and BETTA: TO charging statements'.

4.16. All responses will normally be published on the Ofgem website and held electronically in the Research and Information Centre unless there are good reasons why they must remain confidential. Respondents to the consultation should try to put any confidential material in appendices to their responses. Ofgem prefers to receive responses in an electronic form so they can be placed easily on the Ofgem website.

Appendix 1: Modifications to NGC's licence to implement the BETTA proposals

Appendix 2: Modifications to SPTL's licence to implement the BETTA proposals

Appendix 3: Modifications to SHETL's licence to implement the BETTA proposals

Appendix 4: Modifications to SPTL's licence to implement the roll forward proposals

Appendix 5: Modifications to SHETL’s licence to implement the roll forward proposals

Appendix 6: Respondents to Ofgem's July report

Transmission price controls and BETTA: Final proposals and impact assessment, December 2004, Ofgem 279/04

Respondents to impact assessment

National Grid Transco

Appendix 7: Impact assessment

Roll forward price controls (SPTL and SHETL)

Objectives

For SHETL and SPTL, the current transmission price controls expire on 31 March 2005.

The objectives are to roll forward the price controls for SPTL and SHETL (absent BETTA) to align the price control review dates with those for NGC enabling all transmission issues (gas and electricity) to be considered together at the next review for 2007. It is proposed to apply these roll forward price controls to SPTL and SHETL if BETTA were delayed.

The roll forward price controls will also form the controls (in relation to SPTL and SHETL) to which the adjustments necessary for BETTA will be made.

Issues

The existing price controls for SPTL and SHETL end on 31 March 2005, and to ensure that the interests of consumers continue to be protected after that date, the "do nothing" option is not appropriate.

Consideration was given to carrying out a review to set controls for a further 5 year period. This was rejected as alignment of transmission price control review dates as early as possible was considered the best solution across gas and electricity, leading to a decision to roll forward the price controls for the two year period (2005/6 and 2006/7)[10].

Consideration was then given as to the approach to be taken in developing these roll forward controls[11]. One option was to carry out a full review for a 2 year period to allow alignment of price control reviews in 2007. This option was not considered a

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[10] Review of transmission price controls from 2005: SP Transmission Ltd, Scottish Hydro-Electric Transmission Ltd, Initial thoughts, March 2004, Ofgem 52/04
[11] Transmission price controls and BETTA, Update, May 2004, Ofgem 107/04

proportionate approach given that it is proposed that the controls would only apply for 2 years. Therefore a more limited review has been carried out.

The main effects of the roll forward price control proposals are on SPTL and SHETL. This is discussed in more detail in Chapter 2 of December 2004 report[12]. The level of the allowed revenues does affect transmission users through the level of transmission charges.

The key issues as set out in this paper are:

a) Opex and capex allowances
These have been set to provide a level of revenues to the transmission licensees which reflect licensees' projections of transmission requirements in 2005/6 and 2006/7 (details of allowance are given in Chapter 2 of December 2004 report).

b) Rolling opex and capex incentives
When considering rolling capital and operating expenditure incentives, the base period covering April 2000 to March 2005, needs to be considered separately from the roll forward period covering April 2005 to March 2007.

It is proposed to apply rolling expenditure incentives in the base period from the year 2003/4 using a methodology similar to that developed as part of the distribution price control review final proposals (DPCR4). It is not proposed to implement rolling opex or capex incentives for SPTL and SHETL for the roll forward period. This is because the capex and opex allowances have not been subject to the level of scrutiny that would be appropriate to a full review, and the cost allocation definitions necessary to make any incentive scheme robust have not investigated. For more details, see Chapter 2 of December 2004 report.

c) Pass-though of network rates
It is proposed to allow SPTL and SHETL to recover the actual costs incurred on

[12] Transmission price controls and BETTA: Final proposals and impact assessment, Ofgem 279/04, December 2004.

network rates. The impact of the pass-through of network rates on users will depend on the outcome of the tax settlement.

d) Cost of capital and treatment of tax
The cost of capital for the SPTL and SHETL reviews is aligned with the proposals under DPCR4. Ofgem has not scrutinised the companies' tax calculations to the extent carried out as part of DPCR4 and there is the risk that moving directly to a post tax cost of capital could unduly disadvantage consumers or licensees. It is therefore proposed that cost of capital should be set on a pre-tax basis, consistent with the DPCR4 assumptions, and augmented to allow for the level of tax allowances calculated as part of DPCR4. This approach is not unreasonable since both SPTL and SHETL have affiliated distribution companies. These affiliated companies are under the same ownership and management as and therefore likely to have similar approaches to accounting and tax policies. For more details, see Chapter 2 of December 2004 report.

Risks and unintended consequences

- The main risk in any price control is that the regulator sets the maximum allowed revenue either (materially) too high or too low because of information asymmetry between the regulator and the company. This risk is likely to be larger in a roll forward control than a full review.
  Ofgem has mitigated this risk by introducing an expenditure reporting regime on SPTL and SHETL (supported by licence obligations), particularly focused on capital expenditure, to identify project costs, the benefits provided by each project, and explanations for changes.

- An important issue is whether the price controls provide appropriate incentives to companies to deliver the outputs required of them and to continue seeking out efficiency savings. In this context, it is not proposed to implement rolling opex or capex incentives for SPTL and SHETL for the roll forward period. The formulation of rolling expenditure incentives will therefore be part of the work for the 2007 review rather than as part of the roll forward review. It is recognised that, as a result, there is a risk that the incentives to drive for efficiency may not be as strong in the roll forward period compared to a longer duration price control (eg 5 years).

Impacts on competition

It is anticipated that there will be no impact on competition as compared with the existing price controls.

Costs and benefits

The level of scrutiny carried out by Ofgem in the roll forward period has been less than would be appropriate in a full review. Consequently, the resources employed by Ofgem and the companies have also been less, striking a balance between the extent of the work programme to develop price control proposals and the protection of the interests of consumers.

Overall, the impacts on licensees are:

- for SPTL, the 2005/6 revenues increase by 9% compared to 2004/5, and
- for SHETL, the 2005/6 revenues increase by 4% compared to 2004/5.

For more details, including the proposed level of allowed revenues for each licensee, see Chapter 2 of December 2004 report.

Environmental impacts

- It is anticipated that there will be no difference in the impact on the environment as compared with the existing price controls. Overall therefore, it is anticipated that the environmental impact of the proposals will be neutral.

Security of supply considerations

- It is anticipated that there will be no impact on security of supply as compared with the existing price controls. No changes are proposed to the form of the existing controls in this regard. Expenditure allowances for companies are higher than levels in existing controls providing for the development and maintenance of transmission assets to support the maintenance of security of supply standards.

Distributional effects

- No changes are proposed to the form of the existing controls in this regard. It is therefore anticipated that there will be no significant distributional effects as compared with the existing price controls.

Securing compliance

- The new price controls will need to be implemented through licence modifications.

- There will be a statutory consultation commencing in February 2005. If companies do not accept the licence modifications, Ofgem expects to refer the matter to the Competition Commission for a decision.

- Once the new price controls have been implemented Ofgem will monitor companies' compliance against the relevant licence conditions in the normal way.

BETTA price controls (SPTL, SHETL and NGC)

Objectives

- to develop proposals to reflect the new trading and transmission arrangements that will apply under BETTA. The proposals include the costs of implementing BETTA incurred by transmission licensees and inclusion of the England-Scotland interconnector into the price controls. These proposals are developed as adjustments to the roll forward controls for SPTL and SHETL, and to NGC's existing price control.

Issues

Given that BETTA has been given effect through the Energy Act 2004 and that the Secretary of State has exercised her powers under that Act to implement BETTA, Ofgem's view is that no other options were considered appropriate.

In relation to the price controls to apply to transmission licensees under BETTA, the key issues (discussed in more detail in chapters 3 and 4 of December 2004 report) are:

a) BETTA implementation costs
   To deliver BETTA, the licensees will need to put in place new procedures, systems and arrangements that provide the necessary interfaces between each other. The associated development costs are additional to those expected at the time of the last price control reviews. For further detail see chapter 4 of December 2004 report.

b) Enduring operating cost changes
   The current price controls and incentives reflect the current sets of activities undertaken by licensees. The split of functions between transmission owners and the GB system operator under BETTA will change the activities, and adjustments to price controls need to be made to reflect licensees' costs in performing these changed activities. In particular, NGC will incur additional costs to perform its new role as GB system operator.
   NGC will incur additional costs with transmission owners for the rescheduling of outages at short notice. The volume and cost of these outage changes is uncertain. The lower estimate of cost is included in the price controls complemented by an income adjusting event provision, should the costs turnout to be significantly different from those projected.
   In addition, the price controls of all transmission licensees will need to remunerate the operating costs related to the England-Scotland interconnector assets that are currently outside the price controls.
   For further details see chapters 4 and 5 of December 2004 report.

c) Valuation of the England-Scotland interconnector on its inclusion into the price controls

In making proposals for the financial arrangements to take effect when the exisiting contractual arrangements for the England-Scotland Interconnector cease to have effect, Ofgem will need to satisfy itself that the proposals are consistent with its statutory duties and that, among other things, the proposed arrangements are reasonable in all the circumstances. This will include identifying the extent to which each licensee will be affected, the interests they will retain under BETTA and, in its proposals, balancing these against the public interest. The methodologies considered for valuing the interconnector are set out in chapter 3[13], which also presents the proposed valuation.

d) Introduction of 'connection PLUGS' to Scotland.

The introduction of BETTA will require connectees in Scotland to enter into new connection agreements with NGC. This combined with the introduction of the PLUGS methodology means that SPTL and SHETL will need to repay significant capital amounts (greater than £10m) to connectees in respect of previous capital contributions made by the connectees. Also in the roll forward period, SPTL and SHETL will need to make additional capital expenditures on infrastructure that would, prior to BETTA, have been funded by connectees. For further details see chapter 4 of December 2004 report.

Risks and unintended consequences

- The main risk in any price control is that the regulator sets the maximum allowed revenue either (materially) too high or too low. To minimise the risks of this, for BETTA implementation costs and capital repayments, licensees will be required to provide audited reports on the actual expenditure incurred. Adjustments to the price controls will be made for

[13] For further information on methodologies, see: Transmission price controls and BETTA, Draft Proposals, July 2004, Ofgem 182/04

differences between projected costs and appropriately incurred actual costs. For further details see chapters 4 and 5 of December 2004 report.

- The issues surrounding the valuation of the England-Scotland interconnector are discussed in Chapter 3 of December 2004 report.

- There is the risk that the STC is not perfectly formulated to provide for efficient interactions between transmission licensees. To mitigate this, Ofgem proposes an income adjusting event provision to encourage licensees to propose changes to the STC that drive efficiency. (see Chapter 5 of December 2004 report)

Impacts on competition

- The impact of BETTA generally on competition is discussed in the RIA for the Energy Act[14] published by the Secretary of State. Ofgem considers that the price controls in themselves do not directly affect competition. The consultation on the proposed transmission charging methodologies of the GB system operator is also relevant[15] in relation to the impact on customers[16].

Costs and benefits

The main effects are on transmission licensees (SPTL, SHETL and NGC). See Chapter 4 for more details. The level of the allowed revenues does affect transmission users through the level of transmission charges.

The following table shows the increase in overall transmission sector costs to users resulting from the BETTA price control adjustments.

Year 2005/6	Allowed revenues	Allowed revenues	% change

[14] British Electricity Trading And Transmission Arrangements, Regulatory Impact Assessment: http://www.dti.gov.uk/energy/domestic_markets/electricity_trading/ria.pdf
[15] The proposed transmission charging methodologies of the GB system operator, An Ofgem consultation and Impact Assessment, Ofgem 241/04, October 2004
[16] Further analysis will be carried out as part of the approval process for NGC's charging methodology.

2002/3 prices	absent BETTA	with BETTA	
SPTL	£ 127m	£ 150m	18%
SHETL	£ 52m	£ 47m	-10%
NGC*	£ 838m	£ 872m	4%
Total	£1017m	£1069m	5%

* Excludes NGC's SO external cost incentive scheme costs

The overall revenues of transmission licensees increase by 5% (£52m) in 2005/6, broken down as follows:

- 1.6% (£17m) due to the inclusion of the assets comprising the England-Scotland interconnector into the price controls. This represents a reallocation of costs from interconnector users to transmission users with the total costs reducing primarily as a result of a change in financing risks.

- 1.5% (£16m) due to BETTA implementation costs (total expected implementation costs are £38.6m[17], recovered over the years 2005/6 to 2012/13)

- 0.9% (£9m) due to additional enduring costs incurred licensees to carry out their new roles (mainly NGC costs)[18].

- 1.0% (£10m[19]) due to the introduction of PLUGS connection methodology in Scotland - the additional financing and depreciation costs for the additional infrastructure assets. This represents a reallocation of costs between connectees and users of the transmission system.

The costs and benefits of BETTA generally have been reviewed as part of the RIA for the Energy Act.

Environmental impacts

The overall environmental impact of the proposals is expected to be neutral. However, it ~~should be noted that under BETTA, the transmission licensees, and~~ is particularly the

[17] 2006/7 revenues are subject to adjustment for the actual total costs incurred
[18] Future price control reviews may identify efficiency gains to pass to consumers
[19] 2006/7 revenues are subject to adjustment for the actual total costs incurred

system operator, that could cause an adverse impact on the environment by not maintaining losses to an economic minimum. Under the proposed arrangements for 1 April 2005, transmission owners will no longer have the system operator role and will not manage losses on a day- to-day basis and there is a risk that the level of losses might not be optimised under BETTA. This risk is mitigated to some extent by NGC being the subject of a separate GB incentive scheme (which includes losses). However, responsibility for the coordination of investment to reduce losses is a joint one under BETTA, and the price controls proposals specify a losses reporting scheme to provide for the collection of data to inform the development of possible losses incentives in the 2007 price control review.

Security of supply considerations

- The impact of BETTA generally on security of supply is discussed in the RIA for the Energy Act. Ofgem considers that the price controls themselves do not directly affect security of supply.

Distributional effects

- ~~Ofgem does not expect that there will be any significant distributional effects between different classes of consumers as a result of the price controls.~~

- Transmission owner charging statements set out how transmission owners will recover their allowed revenues from NGC, and therefore the main impacts are on NGC. However, potentially there are indirect impacts on users to the extent that the transmission owner statements of charges provide NGC with information on the nature of costs, which might subsequently be charged out to users. This is because NGC has an obligation to adjust the balance of charges where it concludes that to do so would better meet the objectives for its methodology. An example of such differences in cost would be where the rate of return used by SPTL or SHETL in calculating site specific charges to NGC differs from the rate of return used by NGC in its connection charging methodology with users[20]. In this case any balance of revenues between the charging methodologies would be recovered from transmission users rather than connectees. Such differences could lead to a small redistribution of connection related charges from connectees to all users (up to £5m pa; that is less than 0.5% of GB transmission licensees' revenues).

- Transmission charges only make up a small part of domestic customers' final bills (less than 5%). For industrial and commercial customers, this percentage can be much higher. However, for all customers it is the level of charges (which is determined by NGC's charging methodology) rather than the total allowed revenues (determined by the price control) that is more significant.

- Overall Ofgem does not expect that there will be any significant distributional effects between different classes of consumers as a result of the price controls.

Securing compliance

- The new price controls will need to be implemented through licence modifications.

- There will be a statutory consultation commencing in February 2005. If companies do not accept the licence modifications, Ofgem expects to refer the matter to the Competition Commission for a decision.

- Once the new price controls have been implemented Ofgem will monitor companies' compliance against the relevant licence conditions.

[20] NGC currently uses a 6.0% pa real rate of return in calculating connection charges to users, whereas the costs of capital assumed by Ofgem in setting the price controls for SPTL and SHETL were 8.9% and 8.7% respectively.

Appendix 8: SPTL: DRAFT statement of the basis of charges

The attached Statement of the basis of transmission owner charges has been prepared by SPTL and provided to Ofgem for publication in this consultation document.

SP Transmission & Distribution

STATEMENT OF THE BASIS OF TRANSMISSION OWNER CHARGES

CHARGES APPLICABLE FROM 1 APRIL 2005

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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 the GB System Operator (NGC) 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 NGC 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 operating and maintenance.

Where meter connection assets or services are provided by SPT, the associated costs are recovered in connection charges.

The costs recovered through operating 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 NGC

SP Transmission, under Special Condition J1 of its licence, will notify NGC of its best estimates for the amounts TSPt and TSPNt in respect of year t by 1 November of year t-1, where:
TSPt means an amount no more than TRt – BIt (Maximum allowable revenue less BETTA implementation costs); and
TSPNt means an amount no more than BIt (BETTA implementation costs).
Other charging data will be provided to NGC 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 TRt in SPT's licence and is referred to as TO General System Charges in the STC. One twelfth of the total allowed revenue TRt will be billed to NGC each month.

3 TO 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

3.2.1 Payment Options

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 NGC.
The capital cost of constructing or modifying connection assets can be paid in one of four ways:

1. Full capital contribution, with a final payment made in advance of commissioning the connection and with stage payments paid in line with the value of work to be done at the relevant stage. The connection price is the fixed price set out in the TO Construction Offer.

2. Annual charges, calculated in accordance with the methodology set out in Section 3.2.2 and payable on the Completion Date set out in the TO Construction Offer. The connection price is the fixed price set out in the TO Construction Offer.

3. Full capital contribution, paid following a reconciliation of the actual costs incurred in completing the connection assets. Should NGC choose this option, staged milestone payments would be paid by NGC based on a fair and reasonable estimate of the value of work to be done at each stage. The connection price will assimilate the estimates with the actual cost.

4. Annual charges, calculated in accordance with the methodology set out in 3.2.2 and payable on the Completion Date set out in the TO Construction Offer. The connection price is based on the actual costs incurred in completing the connection assets.

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

3.2.2 Connection Capital Charges

NGC will advise SPT of its choice of payment terms. For assets where NGC pays the purchase and installation costs in full, there will be no annual charges. For options 2 and 4 above, the annual charges will be calculated as follows:
Gross Asset Value (GAV) = Connection Price
Capital Charge (CC) = One-off payment by NGC to TO

$$Adjusted\,GAV\,(GAV_{adj}) \quad = \quad GAV - CC$$

Age of the Asset (Age) = Age as at 1 April each year, rounded up to the nearest year

$$Net\,Asset\,Value(NAV) \quad = \quad GAV_{adj} \times \frac{39.5 - Age}{40}$$

$$Depreciation\,Charge \quad = \quad \frac{GAV_{adj}}{40}$$

Return Charge = NAV x a reasonable rate of return
Annual Charge = Depreciation charge + return charge
The GAV and CC are increased annually by RPI where RPI is defined as:

$$RPI_n \quad = \quad \frac{May\ to\ October\ average\ RPI\ in\ year\ n-1}{May\ to\ October\ average\ RPI\ in\ year\ n-2}$$

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

3.3 Early Termination of commissioned connections

Costs of new connections will be fully recoverable from NGC in all circumstances, including the liability to pay a Termination Amount where a Construction Agreement is terminated by NGC.
If a connection charge is paid by annual charges and NGC gives notice of termination of the Connection Agreement prior to the expiry of the economic life of the connection assets, SPT will require NGC 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:
NGC will be liable to pay an amount equal to the NAV of such connection assets as at the end of the financial year in which termination or modification occurs, plus:

- The reasonable costs of removing such connection assets. These costs being inclusive of the costs of making good the condition of the connection site; and

- If a connection asset is terminated before the end of a financial year, the connection charges for the full year remains payable.

The calculation of termination amounts for financial year n is as follows:
Termination Charge$_n$ = C_n + NAV + R where:

C_n = Outstanding Connection Charge for year n

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

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

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

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

3.4 Re-Use of Connection Assets

Should the connection assets be re-employed within a five-year period, such that SPT receives connection charges as a result of their use, part of the termination charge will be refunded to NGC. 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.

3.5 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.

3.6 Transmission Operation and Maintenance Costs

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

3.7 Early Termination of Transmission Reinforcement Works

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

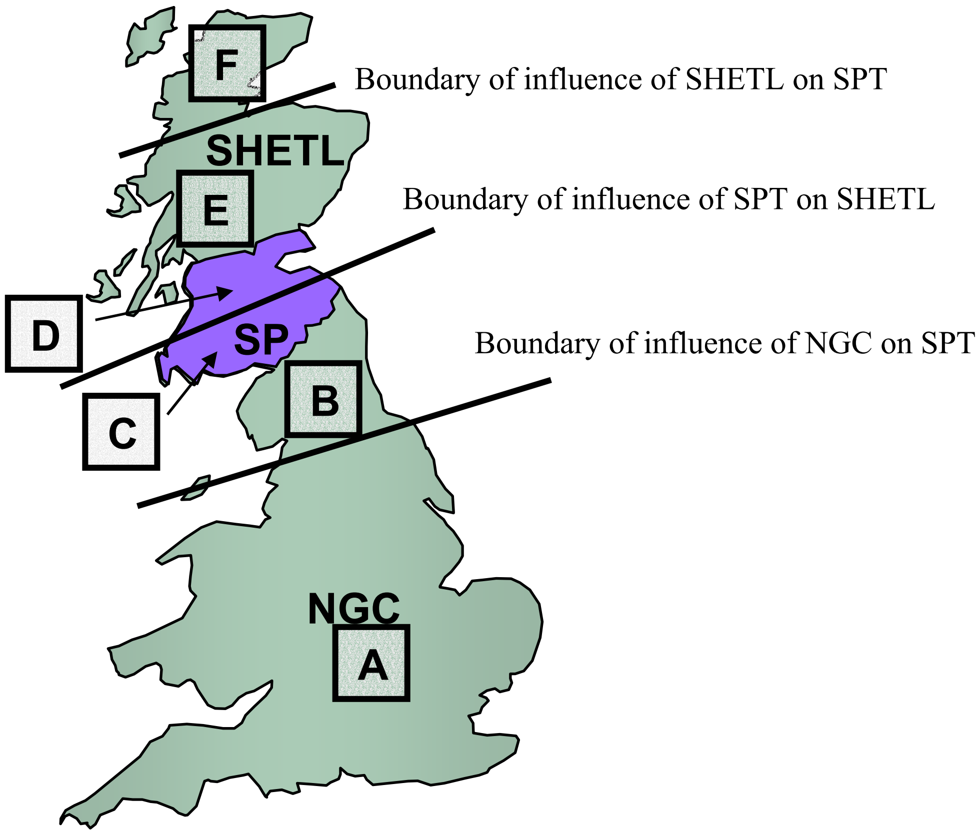
4 OTHER CHARGES

4.1 Application Fees

If, as a consequence of a User Application, NGC considers it may be necessary for a Construction Project to be undertaken in respect of such User Application, and it submits an NGC Construction Application to SPT, SPT will charge NGC 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. NGC 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.

4.1.1 Fixed fee

Should NGC elect to pay a fixed fee for its NGC Construction Application, SPT will charge NGC an application fee as 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.



Transmission Licensees' Boundaries of Influence

4.1.2 Variable Price Application Fee

For a variable price application SPT will charge NGC the appropriate fixed fee in Appendix A and carry out a 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 NGC 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 NGC request assistance with the preparation of a 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 its transmission system, which although directly attributable to the connection, may not give rise to additional connection assets. These costs are referred to as "one-offs". Where these costs cannot be justified by planning standards and are incurred as a direct result of NGC's Construction Application, they will be included in the TO Construction Offer and charged accordingly.
Additional infrastructure related works above the minimum scheme required to connect a customer will always be recovered as a one-off capital charge.

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 construction of the connection shall be paid to the TO by NGC. These costs will cover all of the TO'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 to the project in accordance with the charge-out rates in Appendix C.

Any capital costs incurred by the TO in acquiring land shall be recovered through General System Charges.

4.5 Outages rearranged at NGC's request

Should NGC request SPT to cancel or rearrange an outage, which has been planned and mutually agreed following the process outlined in the STC, NGC will pay SPT charges. These charges will be proided on request fvor specific outages.

5. INDICATIVE CHARGES

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

- Generation capacity and 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 prices for an NGC Construction Application for a new connection

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

Appendix B - Fixed prices for an NGC Construction Application for a modified connection

	Type of connection	*MW **	*Fee (£k)*
1	Directly connected generation Zone B	< 300 => 300 and < 1000 => 1000	20 40 60
2	Directly connected generation Zones C & D	< 100 => 100 and < 300 => 300 and < 500 => 500 and < 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	Modification of existing GSP Zones C & D	All	20
8	Modifications to alter connection commissioning dates	All	5

* MW value is the final value being applied for

Appendix C - SPT Engineering Rates

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

All fees are subject to the addition of VAT.

Appendix D - Indicative connection charges

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

Description	*£k*					
	275kV		*132 kV*		*33 kV*	
	Charge	First year annual charge	Charge	First year annual charge	Charge	First 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

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

Appendix 9: SHETL: DRAFT statement of the basis of charges

The attached Statement of the basis of transmission owner charges has been prepared by SHETL and provided to Ofgem for publication in this consultation document.

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

Effective 1 April 2005

Price: £5

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

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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 NGC (GBSO) of transmission services as specified in the System Operator Transmission Owner Code (STC). This Statement is effective from the British Electricity Trading and Transmission Arrangements (BETTA) Go-Live date. The charges shall consist of general system charges, site specific charges and other charges as set out below.

Introduction

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

a. a schedule listing those items (including carrying out of works and the provision and installation of electrical lines or electrical plant or meters) of significant cost liable to be required for the purposes of connection (at entry and exit points) to the licensee's transmission system for which site specific charges may be made or levied and including (where practicable) indicative charges for each such item and (in other case) an explanation of the methods by which and the principles on which such charges will be calculated ;

b. the methods by which and the principles on which site specific charges will be made in circumstances where the electric lines or electrical plant to be installed are (at the licensee's discretion) of greater size or capacity than required;

c. the methods by which and the principles on which any charges(including any capitalised charge)will be made for maintenance and repair required of electrical lines or electrical plant or meters provided or installed for making a connection to the licensee's transmission system;

d. the methods by which and the principles on which any charges will be made for disconnection from the licensee's transmission system and the removal of electrical plant, electrical lines and ancillary meters following disconnection, and

e. such other matters as shall be specified in directions issued by the Authority from time to time.

Principles

This statement sets out SHETL's charges for the provision of transmission services to NGC by invoicing NGC 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.

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

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

Part 1 - General System Charge

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

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

The **General System 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 NGC'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 NGC.

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 NGC.

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

(1) Capital charges

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

Post-vesting pre-BETTA connections

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

Post-BETTA connections

For assets installed after the BETTA go-live date, SHETL will recover the cost of connection from NGC 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 NGC will based on one of the following price basis and payment terms will reflect either Option (a), (b) or (c) above.

(i) <u>Fixed price offer</u>

Upon receipt of NGC'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) <u>Indicative price offer</u>

Upon receipt of NGC's formal application for a connection, SHETL will submit an indicative price offer within three months of the effective application date and SHETL will confirm or amend the indicative price to a Fixed price at least six months prior to date of commencement of any works (as stated in the indicative offer).

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

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

For Option (a) where NGC 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 NGC has requested and paid partial capital contribution the annual capital connection charge will recover the remaining capital cost. The annual capital connection charge will become payable the day after commissioning of the connection assets or from the day the connection assets become available for use.

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

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

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

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

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

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

Where a modification to the existing connection occurs at NGC's request or due to developments to the transmission system, their connection charges reflect any additional connection assets that are necessary to meet NGC'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 assts made redundant as a result of the modification.

(2) Transmission Operation and Maintenance charges

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

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

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

(a) Site-specific Maintenance charge

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

(b) Transmission Running charge

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

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

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

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

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

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

where RPI_n = (May – October average RPI Index in year n-1) / (May – October average RPI Index in year n-2)

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

$$\mathbf{NAV_n = GAV_n * (39.5 - A_n) / 40}$$

Part 3 - Other Charges

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

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

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

Application Fees

SHETL will charge NGC 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.

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

In exceptional circumstances where NGC 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 NGC, 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 NGC's request before any charges become payable, SHETL will refund the original application fee. SHETL will not refund the fees in respect of the subsequent modification(s).

Feasibility Studies

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

The one-off charge is a charge equal to the cost of the works involved.
The calculation of the one-off charge for write-off of assets is outlined below:
Write-off Charge = 100% of remaining NAV of redundant assets
One-off charges are payable upon completion of the works.

Miscellaneous Site Specific Charges

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

Energy Metering Systems

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

Outage Services Charges

Where prearranged outages are rearranged at NGC’s request or where NGC require additional services for planned or unplanned outages over and above the normal service provided under general system charges, NGC will be liable for outage service charges. These charges reflect the costs incurred by SHETL in accommodating NGC’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 NGC’s costs in maintaining system security. Cost will be based on overtime hours worked on the particular outage.
- Costs of installing additional equipment, such as bypass arrangements

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

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

Termination charges

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

The termination charge payable by NGC 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, NGC will be liable to pay an amount equal to the NAV of such assets as at the end of the financial year in which termination or modification occurs, plus:

- The reasonable costs of removing such assets. These costs being inclusive of the costs of making good the condition of the connection site

- If a connection asset is terminated before the end of a financial year, the connection charge for the full year remains payable.

- For assets which SHETL has determined to replace upon the expiry of the relevant replacement period in accordance with the provisions set out in the STC and in respect of which a notice to disconnect or terminate has been served in respect of the connection site at which the assets were located; and due to the timing of the replacement of such assets, no site-specific connection charges will have become payable in respect of such assets by NGC by the date of termination; the termination charges will include the reasonable costs incurred by SHETL in connection with the installation of such assets

- Previous capital contributions will be taken into account

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

Termination Charge$_n$ = C$_n$ + NAV$_{an}$ + R - 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 NGC prior to completion of the works then, in addition to the costs incurred at the time of termination for connection assets, NGC 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 NGC's application for a connection.

Miscellaneous Charges

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

Glossary

Authority The Gas and Electricity Markets Authority (Ofgem)

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

Bilateral Connection Agreement – agreement between NGC and the User covering the connection to SHETL'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

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

GBSO (Great Britain System Operator) being National Grid Company plc (NGC)

Maximum Allowed Revenue as set out in SHETL's licence

Price Control as set out in SHETL's licence.

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

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

Pre-BETTA means before BETTA go-live date

Pre-Vesting means on or before 30 March 1990

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

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

Transmission system The system which consists (wholly or mainly) of high voltage lines and electrical plant owned or operated by SHETL and used for the transmission of electricity from one generating station to a substation or to another generating station or between substations or to any Interconnector

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

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

APPENDIX 1 INDICATIVE CONNECTION ASSET CHARGES

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

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

FACTORS WHICH CAN INFLUENCE COSTS AND CHARGES

- Standards governing the system.

- Special security of supply requirements

- Length of cable/line required from existing system.

- Size of Exit point / Entry point capacity requirements in relation to available capacity of existing network, including the age of the assets and the condition of the network.

- Whether any extension or reinforcement of the existing network is by underground cable or overhead lines.

- Type of ground requiring excavation; type and extent of reinstatement necessary, including New Roads and Street Works Act requirements; need for road crossings.

- Availability of wayleaves/easements for cables and lines including any planning consents.

- Availability of suitable substation sites including any necessary planning consents.

- Necessity of overtime working.

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

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

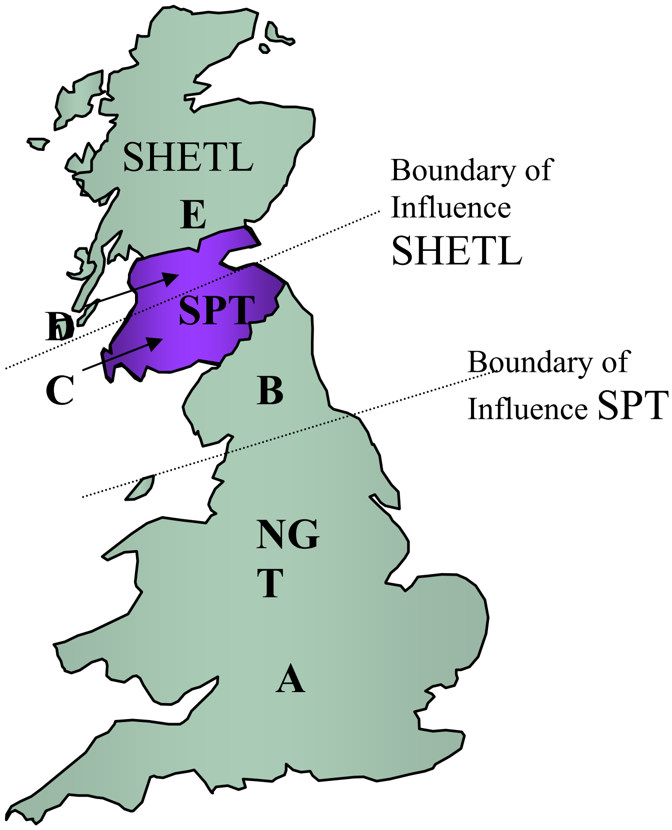
- progression of work required other than in an orderly fashion in accordance with normal engineering policies and practices thus imposing additional costs;

- transformer/ substation sites not provided to the Company in suitable locations at normal prices or rents, taking account both of cable access and access by personnel;

- loads with abnormal characteristics, which affect the security and standard of service on the system, for example, arc welders and large motors.

APPENDIX 2 – APPLICATION FEES

Transmission Licensees' Boundaries of Influence Map



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

All Fees subject to other additional costs covering any other special design requirements eg subsea survey, advance wayleaving etc being payable or underwritten by by NGC.
All fees are subject to the addition of VAT.

Table A – Fixed prices for new bilateral agreements

	5. **6. Connection Application Type & Zone**	**MW**	**Fee (£000)**
1A	Directly Connected generation **Zone E (Host SHETL,** 1.1 *Affected SPT)* 1.2	<100 =>100 <300 =>300<500 =>500<1000 =>1000	20 40 75 100 130
1B	Directly Connected generation **Zone D (Affected SHETL,** 1.3 *Host SPT)* 1.4	<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* **Zone E and Zone D**	<5 =>5	3 5
4A	New Supply point **Zone E (Host SHETL,** *Affected SPT)*	<100 =>100	20 40
4B	New Supply point **Zone D (Affected SHETL,** 1.5 *host SPT)*	<100 =>100	10 20
5	**Suppliers**		No charge

Table B – Fixed prices for modifications to existing bilateral agreements

	7. **8. Connection Application Type & Zone**	**MW**	**Fee (£000)**
6A	Directly Connected generation **Zone E (Host SHETL,** 1.6 *Affected SPT)* 1.7	<100 =>100 <300 =>300<500 =>500<1000 =>1000	20 40 75 100 130
6B	Directly Connected generation **Zone D (Affected SHETL,** 1.8 *Host SPT)* 1.9	<100 =>100 <300 =>300<500 =>500<1000	10 20 35 50

		=>1000	70
7	Addition/reduction of Embedded* Generation **Zone E and Zone D** 1.10		3
8A	Addition/reduction of a transformer at existing supply point **Zone E (Host SHETL,** *Affected SPT***)** 1.11		10
8B	Addition/reduction of a transformer at existing connection point **Zone D (Affected SHETL,** *host SPT***)** 1.12		5
9A	Modifications to existing supply points and agreements **Zone E (Host SHETL,** *Affected SPT***)**	<100 =>100	15 20
9B	Modifications to existing supply points and agreements **Zone D (Affected SHETL,** *host SPT***)**	<100 =>100	7 10
10	Modifications to alter connection/commissioning dates **Zone E and Zone D**		7
11	Increase in Transmission entry capacity **Zone E and Zone D**		7

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

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

APPENDIX 3 CHARGE-OUT RATES

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

All fees are subject to the addition of VAT.