The Balancing and Settlement Code under BETTA

Ofgem/DTI Consultation on a BSC to apply throughout GB

December 2002
80/02

Summary

This document is the first in a series of three consultations to develop a Balancing and Settlement Code as part of the British Electricity Trading and Transmission Arrangements (BETTA) which are planned to be introduced in April 2004[1]. It is proposed that under BETTA there will be a single Balancing and Settlement Code ("the GB BSC") to apply for all wholesale trades of electricity in England, Wales and Scotland. This will be in place of the current BSC which applies only in England and Wales and the separate trading arrangements in Scotland based on the Trading Code, bilateral contracts and the Settlement Agreement for Scotland (SAS). In this document:

- Ofgem/DTI propose that the GB system operator should have a licence obligation to have in force a GB BSC, that this should be governed by a single panel and that these arrangements should be based on the existing England and Wales BSC
- the timetable and process for development of a GB BSC is set out, and
- the changes that need to be made to the existing BSC to bring about the change in scope from England and Wales to GB are examined together with matters raised by respondents to earlier consultation papers concerning the BSC. Views are invited on these matters and the application of the England and Wales BSC to GB. Ofgem/DTI anticipate that coming to conclusions on such matters will enable a first draft of the text of a GB BSC to be produced.

[1] Which is subject to the Electricity (Trading and Transmission) Bill being introduced in the current Parliamentary session and Royal Assent to the E(TT) Bill by September 2003.

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1. Rationale

1.1. The rationale for the British Electricity Trading and Transmission Arrangement (BETTA) reforms is set out in a consultation paper of December 2001[2] (the "December 2001 consultation") and a report of May 2002[3] (the "May 2002 report"). Further, the DTI has published a draft Regulatory Impact Assessment (RIA), which explains the purpose and impact of the proposed primary legislation to enable the BETTA reforms. The final RIA, to be published with the Electricity (Trading and Transmission or "E(TT)") Bill, will explain the expected costs and benefits of BETTA

1.2. The December 2001 consultation proposed that GB wide trading arrangements should be achieved by introducing a BSC to apply across the whole of GB (the "GB BSC"), using arrangements applying in England and Wales as a basis for consultation. The document sought views on any issues associated with GB balancing and settlement.

1.3. The May 2002 report noted that the majority of respondents to the December 2001 consultation supported the introduction of a GB BSC and the use of the England and Wales settlement systems to support a GB BSC. The document also noted that there would be consultation on any issues arising from the application of the England and Wales BSC across GB.

1.4. This purpose of this consultation is to consider the application of the England and Wales BSC to GB and to seek views on this. Consideration has also been given to issues raised by respondents to previous consultations. In considering further a GB BSC, the following issues have been identified. The rationale for each of these is set out below and these issues are dealt with in more depth in the rest of the document.

The legal framework and scope of the GB BSC

1.5. The licence duty to have in force a BSC which sets out the terms of the balancing and settlement arrangements in England and Wales currently rests

[2] The Development of British Electricity Trading and Transmission Arrangements (BETTA): A consultation paper, Ofgem, December 2001 Ofgem #74/01.

[3] The Development of British Electricity Trading and Transmission Arrangements (BETTA): Report on consultation and next steps. Ofgem/DTI, May 2002 Ofgem#38/02.

with The National Grid Company Plc as the system operator. As the GB system operator is to be responsible for balancing the GB transmission system, it is proposed that the licence obligation to have in force a Balancing and Settlement Code will be in the GB system operator's transmission licence.

1.6. The treatment of the Shetland Isles, as an electrically isolated island, was raised in the December 2001 consultation. It is currently included in the settlement arrangements for Scotland and it is proposed to include it in the GB settlement arrangements.

The basis of the GB BSC

1.7. The GB BSC has to be developed. Ofgem/DTI propose that the existing England and Wales BSC be used as the basis for developing the trading arrangements to apply across GB.

Changes required to make the existing BSC apply across GB

1.8. Some changes will be needed to enable the existing BSC to apply across GB and these are considered. The main effects of applying the existing BSC across GB are considered and views are invited.

1.9. Consideration of changes required to make the existing BSC apply across GB has been carried out on the "baseline 4" version of the existing BSC. This baseline definition can be accessed on the ELEXON website at www.elexon.co.uk/ta/bscrel_docs. Baseline definitions on the ELEXON website are updated when there is a release of system software. Please note that as modifications are approved to the BSC then the most recent version of the BSC, reflecting the modification made, is maintained on the ELEXON website.

2. Timetable

2.1. As described in the May 2002 report, this document is the first in a set of three consultation papers designed to develop a GB BSC.

2.2. The proposed timetable and process for development of a GB BSC is as follows:

- this paper is the first consultation paper on the GB BSC. Its aims are to consider what changes will be required to the England and Wales BSC for it to have effect across GB, to consider the application of the England and Wales BSC to GB and to seek views on these matters. In this paper issues are identified that require resolution to enable a draft GB BSC to be prepared

- responses to this consultation document should be sent by Friday 7th February 2003 to David Halldearn (details below)

- subject to the responses received, it is anticipated that a report on the conclusions will be published in March 2003. The aim of this report will be to set down the arrangements to be embodied in the GB BSC, in sufficient detail such that legal drafting can proceed

- the conclusions will be used to inform the preparation of a first draft of the legal text for the GB BSC. In addition, any relevant conclusions from other BETTA consultations will be taken account of in the legal drafting. All such issues will be highlighted, and their relevance and appropriateness for GB application, will be addressed in the consultation document that will accompany the proposed legal text[4]. Further, any approved[5] amendments to the BSC that have occurred since the version specified in paragraph 1.9, will be identified in the consultation document and proposals for whether and how they should be incorporated into the GB BSC put forward for comment. This

[4] It is possible that such issues will arise in such a way or at such a time that they cannot be incorporated into these consultation cycles. Should that be the case they will be consulted upon, where practicable, separately.
[5] Shortly, a document will be published describing the process for the consideration by the Authority of proposed changes to England and Wales codes in the context of the progress of BETTA.

consultation document is planned to be published in April 2003 with responses requested in May 2003

- the third consultation will be on a second draft of the text of the GB BSC. This will take into account comments received on the first draft text and differences from the second consultation will be highlighted or explained. This consultation will also consider any further changes that have been approved to the existing England and Wales BSC since publication of the April 2003 consultation and will consult upon their suitability for inclusion in the GB BSC. It is anticipated that this will be published in July 2003 with responses requested in August 2003

- it is planned that conclusions and final legal text for the BSC to apply across GB will be published in September 2003. It is anticipated that the GB BSC will be given legal force by being designated by the Secretary of State through powers provided in the E(TT) Act. The process for requiring any progressive bringing into force of the GB BSC will be addressed and consulted upon in the context of a consultation paper on implementation and transitional issues, and

- further changes to the GB BSC may be required during the period between September 2003 and BETTA go-live. For example, changes may have occurred after July 2003 to the England and Wales BSC which may need to be reflected in the GB BSC. Should such changes arise, their inclusion in the GB BSC will be consulted upon at that time.

2.3. The drafting of legal text for the GB BSC will be progressed by Ofgem/DTI and their legal advisors and all of the above consultations will be conducted by Ofgem/DTI.

2.4. On 18 September 2002 Ofgem issued a formal notice under Section 11A of the Electricity Act 1989 of the intention to modify the BSC Applicable Objectives contained in NGC's transmission licence[6]. The purpose of this was to provide a framework within which a modification to the BSC could be considered that would enable BSCCo to work on matters associated with BETTA, were such a

[6] 'ELEXON and the introduction of BETTA – conclusions on the proposed modification to NGC's transmission licence and consultation under section 11A notice to modify NGC's transmission licence' 18 September 2002 Ofgem 58/02.

modification to be raised. The modification to NGC's transmission licence took effect on the 30th October 2002. A modification to the BSC has since been raised[7], proposing that BSCCo be enabled to work on matters related to BETTA. Should this modification be put to and approved by the Authority, ELEXON's assistance on the drafting of the GB BSC would be sought.

Views invited

2.5. Parties are free to raise comments on any of the matters covered in this paper and in particular on the items requested. All responses will normally be published on the Ofgem website and held electronically in Ofgem's Research and Information Centre unless there are good reasons why they must remain confidential. Respondents should try to put any confidential material in appendices to their responses. Ofgem prefers to receive responses in an electronic form so they can easily be placed on the Ofgem website.

2.6. Responses, marked "Response to first BSC consultation" should be sent by Friday 7th February 2003 to:

David Halldearn
BETTA Project
Office of Gas and Electricity Markets (Ofgem)
9 Millbank
London
SW1P 3GE
Fax: 020 7901 7479

2.7. Please e-mail responses to BETTA.consultationresponse@ofgem.gov.uk marked "Response to first BSC consultation". All consultation responses will be forwarded to the DTI.

2.8. If you wish to discuss any aspect of this document, please contact Louise Elder, e-mail louise.elder@ofgem.gov.uk, telephone 020 7901 7261 or Nicola Douce at DTI, email Nicola.douce@dti.gsi.gov.uk , telephone 020 7215 2779.

[7] Modification P108 'Modification to enable BSCCo to prepare for BETTA' was raised on 1 November 2002.

3. Background

3.1. The requirement for a GB BSC under BETTA was discussed in the December 2001 consultation paper and the May 2002 report.

3.2. Work is ongoing in other areas of the BETTA project, such as the changes required to transmission licences under BETTA, the allocation of roles between the system operator and transmission owners and the development of a GB CUSC and GB grid code. However, such other areas of work are expected to have minimal impact on the development of the GB BSC and so this work can progress in parallel. Any consequential effects to the GB BSC resulting from these other areas of work can be addressed in the later BSC consultations.

3.3. This document does not consider the arrangements necessary to make the legal transition to a BSC to apply it across GB. This document makes proposals only in respect of the enduring arrangements. The legal transition to a BSC to apply it across GB and other practical transitional issues (for example, whether the existing arrangements in both England and Wales and in Scotland will have to be "run-off") will be consulted upon at a later date in the general context of transitional issues. If interested parties wish to refer to any such matters in their responses they should feel free to do so.

4. The legal framework for the GB BSC

Proposed legal framework

4.1. It is a standard condition of the transmission licence[8] for England and Wales (NGC's transmission licence) to have in force a BSC which sets out the terms of the balancing and settlement arrangements for England and Wales. The BSC is designed so that the balancing and settlement arrangements facilitate the achievement of certain objectives (these are discussed further in Chapter 5) and includes flexible procedures for its modification.

4.2. As the GB system operator is to be responsible for balancing the GB transmission system, it is proposed that the licence obligation to have in force a Balancing and Settlement Code will be in the GB system operator's transmission licence.

4.3. The obligation to be a party to the BSC framework agreement and to comply with the BSC is a standard condition of all generation, distribution and supply licences[9] (this applies insofar as the licensee operates in England and Wales). Also other parties may voluntarily accede to the BSC framework agreement if they wish to trade electricity (as a Trading Party, either physically generating in a licence-exempt capacity or trading on a financial basis only) or if they are appointed as an Interconnector Error Administrator or Interconnector Administrator.

4.4. For the BSC to apply across GB, the scope of the balancing and settlement arrangements set out in the transmission licence need to relate to arrangements in GB rather than England and Wales. It is necessary that the definition of the total system (which is also used in defining the scope of the BSC) is amended to include distribution systems in GB (rather than England and Wales).

4.5. In addition, the obligation to be a party to the BSC framework agreement will need to be extended to licensed parties in Scotland. All generators and suppliers who currently trade under the Settlement Agreement for Scotland

[8] Transmission Licence Supplementary Standard Condition for England and Wales C3: Balancing and Settlement Code.

(SAS) are licensed parties[10]. As licensees these parties will be obliged through licence conditions to be a party to the GB BSC framework agreement and comply with the GB BSC. Only one SAS generator and a few suppliers are not currently parties to the England and Wales BSC. These suppliers are affiliated to companies active in the England and Wales market that are parties to the current BSC. Unlicensed or licence-exempt generators or traders in Scotland will have the option to accede to the GB BSC framework agreement.

Basis of a GB BSC

4.6. As stated in the May 2002 report the GB BSC will be developed using the existing England and Wales BSC as a basis for consultation. Specific matters concerned with applying the England and Wales BSC on a GB basis, some of which were raised in response to the December consultation and May report, are addressed in Chapter 5.

Geographic scope of the GB BSC: the Shetland Isles

4.7. The treatment of the Shetland Isles was raised in the December 2001 consultation. Two issues arise in the context of the Shetland Isles under BETTA. The first relates to the responsibility for balancing on the Shetland Isles. Such responsibility currently rests with the distribution network operator. The extent of the GB system operator's "balancing" responsibility will be set down in its transmission licence. This issue of the balancing role on the Shetland Isles will therefore be considered in the consultation paper planned for December 2002 on the transmission licences under BETTA. The second relates to the imbalance settlement arrangements to apply on the Shetland Isles, which is discussed below.

4.8. Few respondents to the December consultation expressed a view on the arrangements that should apply to the Shetland Isles. Two expressed the view that operationally, the distribution system operator should continue to be responsible for balancing the system. Two respondents thought that it was inappropriate for BETTA to apply to island systems.

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[9] SLC 9, SLC 10, and SLC 10 respectively.
[10] A consultation document 'The impact of BETTA upon the Settlement Agreement for Scotland' will be

4.9. At present, the Shetland Isles are the only non-electrically connected island system in Great Britain. Other islands are connected by distribution voltage level cables and have either transmission or distribution systems on them. The Shetland Isles has distribution (but not transmission) and is not connected to the main system.

4.10. Despite not being connected, the Shetland Isles are included within the existing Scottish settlement arrangements and are entitled to be charged equivalent prices to others in the area[11] for transmission, distribution and supply due to the existence of the "Common Tariff Obligation"[12].

4.11. Under the SAS, demand on the Shetland Isles is included in the North of Scotland demand group. Supply is deregulated on Shetland as in the rest of GB. There are several suppliers on Shetland and they are subject to the standard arrangements under the SAS ie they can purchase energy from the host generator or from another generator, if they choose to do the latter then they are charged for any imbalance at Scottish top up and spill prices. Thus, their treatment is exactly the same as any other demand in the North of Scotland area.

4.12. Consistent with the current treatment of generation and demand in the Shetland Isles as exactly the same as any other generation and demand in the North of Scotland Area, it is proposed that under BETTA, the Shetland Isles should be included within the scope of the GB BSC ie Shetland Isles demand should be included in the North of Scotland group and subject to the same arrangements as all other demand; Shetland Isles generation should be subject to the normal (in this case non-directly connected licence exempt) arrangements. Shetland generation and demand will therefore be included in GB energy accounts.

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published shortly.

[11] North of Scotland (including the islands) as specified in SI Order 506 1990.

[12] The Utilities Act 2000 inserted Section 7B of the Electricity Act to allow the Secretary of State to issue an order to require Transmission and Distribution licence holders to apply charges which do not distinguish between users in different parts of a specified area of Scotland; this is known as the 'Common Tariff Obligation'. The Secretary of State can also issue an order to Supply licence holders to charge prices and offer common conditions of contract in a specified area of Scotland. This has been effected by inserting a standard condition (42 paragraph 6) in all Supply licences pertaining to Domestic Supply Contracts, which includes a requirement to charge the same prices to customers within a specified area of Scotland.

4.13. It is currently envisaged that the BSC would not require any special drafting for the Shetland Isles to be included in the BSC arrangements. By default, they will be included by virtue of the fact that they are part of the North of Scotland Distribution Area.

Views invited

4.14. Views are invited on the following proposals:

- that the GB system operator should have the licence obligation to have in force a BSC which sets out the terms of the balancing and settlement arrangements to apply throughout GB
- the basis for development of the GB BSC should be the existing England and Wales BSC, and
- the scope of the GB BSC arrangements should encompass all of GB, including the Shetland Isles.

5. Consideration of the application of the England and Wales BSC to GB

Introduction

5.1. The current version of the England and Wales BSC has been examined by Ofgem/DTI for changes that would be necessary to apply the BSC across GB and consideration is given to the effect on England and Wales and Scottish parties to its application GB wide. The results of this consideration are presented below, generally following the format of the existing BSC. Further matters raised in response to the December 2001 consultation and the May 2002 report are considered in the relevant areas. Views are invited on all areas and on any other matters that respondents may wish to raise.

5.2. Ofgem/DTI are consulting here on the application of the England and Wales BSC across GB. The resulting arrangements would mean the introduction of GB balancing arrangements and GB imbalance settlement. Bids and offers would be submitted into a GB balancing mechanism. In addition the GB system operator would enter into other balancing services contracts to procure required services such as frequency response, black start, reserve etc. Settlement of energy imbalances would take place with a single set of GB energy imbalance prices being applied to energy imbalances. With the introduction of such arrangements it is anticipated that GB energy products on power exchanges and in bilateral contract markets will develop.

5.3. Parties will be able to trade with anyone in GB. The existing interconnector between England and Wales and Scotland will be treated as part of the GB transmission system and will not need the current special arrangements and agreements for trade to take place.

5.4. A description of the current settlement arrangements in both England and Wales and Scotland, largely drawn from the December consultation paper, is provided in Appendix 1.

5.5. Where capitalised terms are used they refer to terms as currently defined in the BSC.

5.6. In the May 2002 report Ofgem/DTI stated the intention that the provisions of the E(TT) Bill would be directed narrowly at providing the necessary powers to make those changes to the existing legal framework which are required to implement and deliver BETTA. It has therefore been a basic principle when considering changes that might be required to deliver a GB BSC that all changes will be limited in some way to only those required to achieve BETTA.

Generic changes

5.7. The obligation to have the existing BSC in force is an obligation on the England and Wales transmission licence holder (NGC), referred to in the BSC as the Transmission Company. The scope of the BSC, as set out in NGC's transmission licence, currently applies to the Total System which is defined as the Transmission System (in England and Wales) and each Distribution System (in England and Wales). As discussed in paragraph 4.4, it is envisaged that the definition of Total System in the GB system operator's licence will change such that it is defined as the GB Transmission System and each Distribution System in GB. The following general changes to the existing BSC have been identified as required for the BSC to apply across GB. Changes are explained in 'plain English' rather than using specific legal text

- replace references to the Transmission Company with the GB system operator (or redefine Transmission Company to mean GB system operator)
- Transmission Licence would generally be replaced by a reference to the GB system operator's licence
- change Transmission System to mean the GB transmission system and Distribution System to include distribution systems in Scotland, and
- change England and Wales to GB (where appropriate). In certain instances "England and Wales" may refer to for example specific law in which case it may be appropriate to retain "England and Wales".

5.8. Changing these definitions would have a consequential effect on other definitions such as:

- an External System currently means a transmission or distribution system outside of England and Wales but this would become outside GB
- an Interconnector currently connects an External System and so would be defined between other systems and GB, and
- an Interconnected System Operator is currently the Transmission Company or Distribution System Operator to whom an interconnector is connected, but would become the GB system operator or Distribution System Operator to whose system such interconnector is connected.

5.9. The following references concern processes surrounding the initial commencement of the BSC in August 2000 and March 2001. As similar terms are being used concerning the commencement of BETTA, care will be needed to ensure clarity in the use of these terms and any similar terms used for BETTA:

- Go-live Date, Code Effective Date and Implementation Scheme (which currently refer to the initial commencement of the BSC).

5.10. The following references would need to be reviewed, and where necessary replaced, by the appropriate terminology under BETTA

- Other industry agreements (Grid Code, Connection and Use of System Code etc), and
- specific licence or licensed activity references (these generally apply to issues such as confidentiality[13]).

5.11. Views are invited on the generic changes proposed to change the existing BSC to a GB BSC.

Parties and participation

5.12. The May 2002 report indicated that creating a GB system operator requires the separation of the undertaking of transmission activities between a single GB system operator and the three existing transmission owners. The BSC[14] defines

[13] For example B2.5.3(a) and H4.3.3(a).
[14] A1.2.

the participation capacities of Parties under the code. Currently one of the participation capacities is that of Transmission Company. Under BETTA it is necessary to consider whether this capacity should be replaced with the GB system operator only, or both the GB system operator and the transmission owners. The role of Distribution System Operators and the Transmission Company in the BSC has been examined to look for potential areas where transmission owners might need to be parties to the code. These areas are described in Appendix 2.

5.13. From a consideration of the areas described in Appendix 2, Ofgem/DTI consider that there is no requirement for transmission owners to be Parties to the BSC. The participation of transmission owners in the BSC Panel is considered below.

5.14. Ofgem/DTI propose that the definition of Public Distribution System Operator should be widened from England and Wales to GB. Therefore Scottish Hydro-Electric Power Distribution Limited and SP (Scottish Power) Distribution Limited will also be Distribution System Operators and will, through conditions in their distribution licences, be required to be parties to the GB BSC. A consultation paper planned for December 2002 will outline the likely changes required to Generation, Supply and Distribution licences under BETTA.

5.15. Views are invited on the need for transmission owners to be a Party to the BSC.

Governing law and general legal conditions

5.16. The SAS specifies the law of Scotland and the exclusive jurisdiction of the Scottish courts. Under the BSC and the framework agreement that gives the BSC contractual force, the governing law is the laws of England and Wales and the jurisdiction is the exclusive jurisdiction of the courts of England and Wales. The issue to be addressed in developing a GB BSC is therefore which governing law and legal jurisdiction should apply to the GB BSC and associated documents such as the GB BSC framework agreement.

5.17. The context in which parties to the BSC framework agreement may have recourse to the courts would relate to disputes between them in relation to BSC. The existing BSC prescribes[15] that generally any dispute shall be referred to

[15] H 7.1.

arbitration pursuant to the Electricity Arbitration Association rules and that the law of England will be the law of reference to arbitration and that the seat of arbitration shall be England and Wales

5.18. The BSC only deals with physical assets in relation to access to metering for testing or inspection[16]. Notwithstanding any provision in the GB BSC to the contrary, the governing law, in relation to heritable assets (ie real property) located in Scotland, will be Scots law. Equally, the governing law in relation to rights pertaining to real assets located in England and Wales will be English law. This position follows from the legal principle *lex situs*[17] and the overriding nature of this legal principle means that there is no need for it to be further specified in the GB BSC. Furthermore, the governing law in the GB BSC framework agreement does not have to be the same as the governing law applying to the rights created by the framework agreement. Thus, the fact that the GB BSC will create some rights (in relation to heritable assets in Scotland) where Scots law will apply does not mean that the governing law for the GB BSC itself cannot be English law.

5.19. As regards jurisdiction, in principle, Scottish courts can adjudicate on matters governed by English law. Where English courts have exclusive jurisdiction, there is a potential problem in relation to heritable assets in Scotland, particularly if interim remedies were to be sought. The procedure involved in obtaining an order from an English court and then registering it with the Scottish court can be difficult and time-consuming. However, Ofgem/DTI consider this is unlikely to be a frequent occurrence, since the seeking of remedies through the courts would be preceded by other dispute resolution processes under the GB BSC.

5.20. Ofgem surveyed a number of other GB-wide agreements[18] in both the electricity and the gas industry. All of these are governed under English law. However, they are inconsistent on the question of jurisdiction. Two of them, the Master Registration Agreement and the Radio Teleswitch Agreement, do not specify jurisdiction, whereas the Network Code provides for the exclusive jurisdiction to the English courts.

[16] L 6.
[17] *Lex Situs* means that for immovable property, the law of the place applies.
[18] The Master Registration Agreement, the Radio Teleswitch Agreement and Transco's Network Code.

5.21. In order that the courts can properly and consistently interpret the BSC and the BSC framework agreement, it is important that the governing law is specified and clearly must be either Scots or English law. It has been argued that, for those parties to the GB BSC located in Scotland who may be regarded as small businesses, the practical need to access and fund expertise in English law in order to understand and enforce their rights is an unreasonable burden to impose upon them. However, it is not unreasonable to assume that all such parties may need to resource access to such expertise in respect of other legal issues (such as insurance or supply of goods) where agreements are frequently governed by English law.

5.22. In the light of the greater number of parties in England and Wales and in the interest of consistency with other GB-wide agreements, Ofgem/DTI take the view that the governing law of the GB BSC should be English law.

5.23. In relation to jurisdiction, the issue is whether it is necessary to extend the GB BSC jurisdiction to include Scottish courts. In the light of the approach in the Network Code, Ofgem/DTI are minded to take the view that the jurisdiction for the GB BSC should be left as it is in the existing BSC, that is, jurisdiction being exclusively the courts of England and Wales.

5.24. Views are invited on any of the matters raised in this section but, in particular, on the following:

- the proposal that the governing law for the GB BSC should be English law, and
- the proposal that the jurisdiction provided for in the GB BSC should be exclusively England and Wales courts.

Governance

5.25. The establishment of the Panel (and Panel objectives), the appointment of Panel members, the power and functions of the Panel, the proceedings of the Panel,

Panel committees and Annual reports and BSC meetings are dealt with in section B of the BSC.

5.26. It is anticipated that the contents to be proposed for the GB system operator licence will result in the objectives of the Panel, set out in the BSC[19], applying across GB. Therefore it needs to be considered whether the panel membership under a GB BSC should reflect any special considerations relevant to Scotland and whether there would need to be a representative of transmission owners on the Panel.

5.27. When the distribution code was extended to cover GB, the Distribution Code Review Panel was changed such that at least one of the Distribution Network Operator and user representatives had Scottish or England and Wales interests. However, the distribution code has some sections which prescribe different technical requirements for specific distribution licensee areas. It is anticipated in the BSC, that the objectives of the Panel, which will be linked to those in the GB system operator's Transmission Licence, will become GB-wide. It is also anticipated that the market arrangements will be common across GB. As all Panel Members are required to be objective and independent[20] and the objectives are expected to be GB-wide, it is not clear that the membership of the Panel should therefore require any specific Scottish or English or Welsh representation.

5.28. A representative of Distribution System Operators is allowed to attend and speak at panel meetings, but is not allowed to vote[21]. It could be argued that transmission owners should have a similar right. However Distribution System Operators have many obligations under the code which transmission owners are not anticipated to have.

5.29. Consideration of the above issues leads Ofgem/DTI to propose that there should be no change to the composition of the Panel and the appointment of Panel Members under a GB BSC.

5.30. This consultation paper does not consider whether or not it is appropriate to re-elect panel members upon the introduction of a GB BSC or whether existing

[19] B1.2.
[20] B2.8.1.
[21] B2.13.

BSC panel members should serve on a GB Panel. This and other issues associated with the transition to a GB BSC will be consulted upon in due course. Views are invited on the composition of the Panel under a GB BSC and on the process for appointment of GB Panel Members.

5.31. The BSC has been in operation for over 18 months and Ofgem/DTI invite views on any changes to the existing governance arrangements of the BSC that should be made to take account of the operation of the BSC across GB.

BSCCo

5.32. The BSC provides for a BSC company (BSCCo) to administer the arrangements under the BSC and to contract with service providers for the supply of services as provided for in the BSC. The BSC currently states that BSCCo means "Elexon Limited (or any successor to that company)"[22]. It is proposed that the role of BSCCo should remain unchanged when the BSC applies across GB.

5.33. As stated in paragraph 1, Standard Condition C3 of NGC's Transmission Licence requires it to have in place and comply with the BSC. The current BSC requires NGC as the transmission licensee in England and Wales to be the holder of all of the issued share capital of BSCCo. The legal subsidiary that NGC owns for this purpose is ELEXON Limited. As stated in paragraph 4.2, it is proposed that under BETTA the GB system operator will have a licence condition requiring it to have in place a GB BSC, similar to the condition that exists in NGC's licence today. It is also envisaged that the GB system operator will fulfil the Transmission Company role under the GB BSC and will therefore be required to be the holder of all of the issued share capital of BSCCo under the GB BSC. The Government has received one application for the role of the GB system operator. The applicant is NGC. Were NGC to be appointed as the GB system operator it is envisaged that ELEXON Limited would fulfil the role of BSCCo under the GB BSC.

Cost recovery

5.34. Cost recovery mechanisms exist in the BSC for the recovery of BSC Costs, which are costs which BSCCo incurs in operating the trading arrangements, and

Party Charges which are the outstanding amounts funded by Pool Members in respect of the 1998 Programme (the '1998 Programme Costs') and funding of the New Electricity Trading Arrangements (NETA) ('Pool NETA Costs'). The 1998 Programme Costs are due to be recovered by 31 March 2003, but the recovery of Pool NETA Costs[23] continues until 31 March 2005. Pool NETA Costs are recovered in proportion to the Main Funding Shares which reflect the Trading Party's share of energy volume traded. The application of the existing rules for the recovery of Pool NETA costs would result in Scottish Parties contributing to the outstanding funding of the Pool NETA Costs (assuming a BETTA go-live date of April 2004[24]), this may be considered to be appropriate as Scottish Parties would be benefiting from the development of NETA. This matter will be considered further in a consultation paper on cost recovery.

5.35. Views are invited on the application of the current cost recovery rules across GB, in particular the potential for recovery of outstanding Pool NETA costs from GB consumers in the financial year April 2004 to March 2005. A separate consultation will consult on the recovery of BETTA implementation costs. The recovery of Scottish Settlements costs is dealt with in a consultation paper on the impact of BETTA on the Settlement Agreement for Scotland to be published shortly.

Settlement metering

5.36. In order to support the wholesale trading of electrical energy both in England and Wales and separately (at present) in Scotland, it is necessary to determine, for each half-hour of the day, the amount of electrical energy (in MWh) produced and consumed by each participant. In order to enable this determination, it is necessary to meter all flows of energy onto and off the transmission system for each half-hour. In addition, metering has to be provided at each exit or entry point to the distribution networks which are supplied from the transmission system. This metering is collectively referred to as settlement metering.

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[22] Annex X-1 General glossary.
[23] Pool NETA Costs are costs incurred by Pool Members in connection with the development of arrangements which the existing BSC effects.
[24] Which is subject to the E(TT) Bill being introduced in the current Parliamentary session and Royal Assent to the E(TT) Bill by September 2003.

5.37. There are two stages in the determination of participants' energy consumption and production. The first stage is the determination of the energy flows onto and off the transmission system. This (stage 1) process has two elements: metering of generation or demand sites which are directly connected to the transmission system; and determination of the total energy supplied to each public distribution network connected to the transmission system. There are currently twelve such networks in England and Wales and two in Scotland.

5.38. The second stage in the process (stage 2) is the determination, for each public distribution network, of the energy produced or consumed by each participant in respect of that network, based upon the settlement metering of the entry and exist points on that network.

5.39. All settlement metering is required to be provided to a standard set out in metering codes of practice. Different codes of practice currently exist in England and Wales and in Scotland, but the Scottish codes of practice stipulate that they are technically equivalent to the England and Wales codes.

5.40. The significance of the term settlement metering is that readings from such metering are used in the calculation of the sums due and owing to participants in the wholesale trading of electricity and is therefore subject to the appropriate level of checks and challenge. Settlement metering existed in England and Wales, under the Pooling and Settlement Agreement (P&SA) since Vesting and under the BSC since March 2001. Settlement metering has existed under the SAS in Scotland since August 1998.

Settlement metering in England and Wales

5.41. The arrangements for settlement metering in England and Wales are specified in the BSC. Section K identifies the party who is responsible for exports and imports of electricity at points of connection to the transmission or distribution network and for the provision and registration of metering systems to measure those imports and exports. Section L specifies the detailed arrangements for that metering.

5.42. Broadly speaking, the Party identified as responsible for the provision and maintenance of metering to measure imports and exports is as follows:

- for licensed generators, the generator
- for licence-exempt or exemptable[25] generation, either the generator or another Party on the generator's behalf
- for a supply of electricity to premises or to licence-exempt generation, the supplier
- for an Interconnector, the Interconnected System Operator[26] (see later section for proposed GB responsibility for interconnector metering)
- for a Grid Supply Point[27], the Distribution System Operator whose system is connected to the transmission system at that point, and
- for a point of connection between two distribution systems, one of the two Distribution System Operators (as agreed between them).

5.43. Note that it will no longer be a requirement to separately meter the interconnectors between the three transmission licensee networks for settlement purposes.

5.44. Note it is not proposed to alter the definition of Grid Supply Point[28] from that in the existing BSC because this definition will include all the necessary (distribution network connection) Bulk Supply Points[29] and the other Bulk Supply Points would be treated as directly connected BM Units.

5.45. The Party responsible for the provision of metering is also responsible for its registration. The BSC defines two separate registration mechanisms: Central Volume Allocation (CVA) and Supplier Volume Allocation (SVA). The CVA registration arrangements are for metering systems measuring flows onto and off the transmission system so that transmission connected demand and generation

[25] Exemptable generation is that which, if it were the only generation under the control of the generator, would not require the generator to hold a generation licence.
[26] The Interconnected System Operator is currently defined as the Transmission Licence holder or the Distribution System Operator to whose system the interconnector is connected.
[27] Known as a Bulk Supply Point in Scotland.
[28] Annex X-1:Grid Supply Point means a Systems Connection Point at which the Transmission System is connected to a Distribution System. Systems Connection Point means a point of connection between two or more Systems etc. System means the Transmission System or a Distribution System.
[29] SAS definition: Bulk Supply Point means 'A point of supply from a transmission system to a: distribution system, or independent distribution network, or grid-connected composite site, or grid connected customer site'.

sites, grid supply points, interconnectors and licensed generators are registered in CVA.

5.46. The SVA arrangements for the provision and registration of metering are based on those that were put in place GB-wide in 1998 as a key part of the arrangements to enable competitive supply. These are arrangements for registration of the party responsible for the energy flows at each point of connection to each Public Distribution Network and the collection and aggregation of the readings from the meters at those points. There is one registration system, operated under the terms of the Master Registration Agreement (MRA) by the Distribution System Operator for each of the existing (fourteen) Public Distribution Networks in GB.

5.47. In relation to the obligation to comply with metering Codes of Practice, the BSC does not expect that all metering will be upgraded to comply with the very latest technical standards. Rather, Section L3.2 of the BSC specifies the requirement to comply with the "relevant Code of Practice". The "relevant Code of Practice" is identified as the one that applied when the metering system was first registered for the purposes of settlement. In addition (in paragraph 3.2.3) this reference is referred back to the Code of Practice which applied under the P&SA (ie the requirement to comply is referred back to a time prior to the BSC coming into force).

5.48. Further, the BSC, (in paragraph L3.4) recognises that there may be financial or practical reasons why a metering system may not comply with some of the requirements of the relevant Code of Practice and allows Parties to apply to the BSC Panel for a Metering Dispensation from the requirements of the Code of Practice.

Settlement metering in Scotland

5.49. The arrangements for settlement metering in Scotland are specified in the SAS, whose object is only that of determining the electrical energy produced or consumed by each party in each half-hour. The SAS places obligations on Parties in respect of metering as follows:

- for Bulk Supply Points (BSPs)[30], on the Scottish Companies[31]
- for all exit points from the Public Distribution Networks, on the supplier registered in the relevant PES Registration Service (PRS), and
- for all Registrable Generation Sites, on the Generator Party concerned.

5.50. The arrangements for BSPs are broadly equivalent to those in England and Wales. The England and Wales arrangements for points of connection to Public Distribution Networks are the same as in Scotland except that the registration arrangements in England and Wales are known as Supplier Meter Registration Services (SMRS) instead of PRSs. Both sorts of registration services operate in the same manner under the MRA.

5.51. The only key difference between England and Wales and Scotland in the arrangements for settlement metering is that in Scotland none of the generation which forms part of the trading portfolio of either of the Scottish Companies is required to be metered for settlement. This is because the total generation for each of the Scottish Companies in its own authorised area is calculated as the difference between the total demand in and the generation from Registrable Generation Sites in that area.

5.52. Thus in Scotland, some generation has never been obliged to be metered to Code of Practice standards and the readings from whatever metering may exist for such generation has not been used in the settlement of wholesale electricity trades and therefore has not been subject to the checks and challenges that result.

Application of England and Wales metering arrangements to GB

5.53. Were the BSC arrangements in respect of metering requirements, as laid out in Sections K and L to be applied to GB-wide as they stand, the following would be the key implications:

[30] See earlier footnote for SAS definition of BSP.
[31] The Scottish Companies under SAS are Scottish and Southern Energy PLC and Scottish Power UK plc.

- any metering systems in Scotland which comply with the current Scottish Codes of Practice will comply with the current Codes of Practice under the GB BSC, because the Scottish Codes of Practice are technically equivalent to those in England and Wales

- settlement metering in Scotland that complies with earlier versions of Scottish Codes of Practice, would not comply with the requirements of Section L, because Section L would not recognise the earlier Codes of Practice as "relevant", although settlement metering in England and Wales which complied with an equivalent Code of Practice would comply with Section L (see explanation below), and

- the metering for the generation in the portfolios of the two Scottish Companies, unless it complies with the current versions of Scottish Codes of Practice, will not comply with the requirements of Section L.

5.54. It is inappropriate that settlement metering in Scotland should fail to comply with Section L, when it complies with an equivalent Code of Practice to settlement metering in England and Wales that does comply with Section L. This comes about only because Section L recognises the existence of settlement metering (under the P&SA) which existed before the BSC came into force but not settlement metering that existed under SAS. Ofgem/DTI are therefore of the view that the GB BSC should recognise the comparability of settlement metering under the SAS and should include such metering in its definition of the "Relevant Code of Practice".

5.55. The position of the metering systems measuring the flows of energy for the generation in the portfolios of the two Scottish Companies is more complex. These metering systems have not been used to provide data that has been used in settlement processes and other parties cannot therefore be assured of the quality of the data provided by those metering systems unless they are shown to comply with current Codes of Practice. Ofgem/DTI therefore take the view that no change to the BSC requirements should be proposed in the GB BSC in respect of those metering systems. The consequence of this would be that the parties that will be responsible for the metering systems under the GB BSC would have to ensure either that the systems comply with current Codes of

Practice or, if this could not be achieved for financial or practical reasons, apply to the GB BSC Panel for a Metering Dispensation[32].

5.56. Views are invited on the issues raised above, consequent to applying the England and Wales treatment of settlement metering on a GB basis via a GB BSC, and in particular, on the following issues:

- the proposal that the definition of "relevant code of practice" under the GB BSC should include the compliance of settlement metering systems under SAS with codes of practice when they were first used for settlement, and
- the proposal that no specific provision should be made in respect of metering systems which have never been used for settlement under SAS.

BM Unit representation

5.57. Respondents to the December 2001 consultation paper raised the treatment of cascade hydro. Cascade hydro generators currently exist in the North of Scotland Area where the output of the generators, and the ability to operate them, is dependent on run of river flow and the storage capacities of various reservoirs along the linked sets of generators. The Scottish grid code has arrangements in its Scheduling and Despatch Code 2 which recognises the hydraulic constraints surrounding the operation of cascade hydro by allowing it to be despatched on a group basis, with details of the plant used to satisfy instructions by the system operator available on demand. This issue was discussed in the Reform of Scottish Trading Arrangements[33] and it was proposed that cascade hydro groups could be treated as a single Balancing Mechanism Unit (BM Unit), no further special requirements were identified.

5.58. BM Units are registered in accordance with section K3 of the BSC. One of the conditions that the BM Unit shall satisfy[34] is that the Exports of electricity from a generator are capable of being controlled independently of Exports from another generator. It is also stated that, subject to a referral to the Panel, a generator whose Export is registered in the Central Meter Registration Service (which would be true of any directly connected generator) would normally

[32] L 3.4.
[33] 'Reform of Scottish trading arrangements: BETTA A summary of responses to the August 2000 document' April 2001 Ofgem 31/01.

expect to be a single BM Unit. However, a party may refer the definition of their BM Unit to the Panel if they consider that it satisfies, for example, the independent control criteria given above. Ofgem/DTI therefore consider that the current provisions of the BSC could be used in the case of cascade hydro to define a BM Unit comprising more than one generator

5.59. This would mean that bids and offers would be submitted for the group of generators and the BM Unit metered output would comprise the sum of the various meters. It is however also noted that there are no instances of BM Units metered in the Central Meter Registration Service currently that straddle more than one Boundary Point (ie one BM Unit that is metered at several points of Export to the system) and therefore views are invited on the above proposal, whether the formation of such a BM Unit would present any difficulties and if so what alternative solutions may be available.

5.60. The BM Unit MW levels for which Physical Notifications are required are considered in the first consultation on the GB grid code[35].

5.61. Views are invited on the representation of cascade hydro as a single BM Unit and any GB BSC changes required to enable this.

Small generators

5.62. The treatment of small generators in Scotland was an area of concern in responses to the December consultation paper. The main issue was the effect of extending the England and Wales BSC on the numerous small generators which are directly connected to the 132kV network in Scotland and the classification of the 132kV network as transmission. The May 2002 report stated that 132kV in Scotland would be treated as transmission and that the effects of this on small generators would be examined.

5.63. With the existing definition of transmission and the current exemption rules: generation connected to the 132kV network in Scotland is directly connected whereas in England and Wales it is embedded; generation between 50 and

[34] K3.1.2(b).

100MW in Scotland is licensed whereas in England and Wales most plant up to 100MW has been granted exemption[36]. In Scottish Power's area there are seven generators connected at 132kV; of these 2 are less than 100MW and the other five are below 50MW. This means that in effect all seven of these generators would be treated as directly connected in Scotland but embedded in England and Wales, and the larger two are licensable in Scotland but may have been considered exempt had they been in England and Wales. In Scottish Hydro-Electric's (SHE's) area there are 27 132kV directly connected generators of which 24 are under 50MW. The smallest directly connected plant in SHE's area is 4MW.

5.64. The existing BSC rules are driven by whether the generating plant is directly connected and also by whether it is classed as licence-exempt ("exemptable"). At the time of development of the NETA arrangements, there were no small, directly connected generators in England and Wales, nor were there envisaged to be, so although the BSC has rules for directly connected, exemptable generating plant, the principles underlying these rules could be considered to be untested. They are by default almost the same as those for directly connected, licensed plant.

5.65. The "embedded benefits" received by small generators in England and Wales are achieved from both the BSC rules and the transmission charging rules published by NGC[37], so the position of small generators cannot be determined from an analysis of the extension of one or the other in isolation. A further consultation will be published dealing specifically with transmission connected small generators which encompasses all the relevant arrangements.

Interconnectors

5.66. Under BETTA the interconnector arrangements under the BSC would no longer apply to the interconnector between Scotland and England. However, they would in future also apply to the interconnector between Scotland and

[35] The grid code under BETTA, December 2002, Ofgem #78/02.
[36] Statutory Instrument 2001 No. 3270 'The Electricity (Class Exemptions from the Requirement for a Licence) Order 2001'.

[37] The Statement of the Use of System Charging Methodology, Effective from 1 April 2002, NGC.

Northern Ireland, the Moyle interconnector. The main features of interconnector trading through the existing BSC are:

- the Interconnected System Operator has the responsibility to inform the Central Registration Agent of the Interconnector Boundary Points and is responsible for installing, maintaining and operating (or procuring such) the Metering Equipment and shall be the Meter Registrant[38]

- an Interconnector Administrator has to be appointed for each Interconnector. The Interconnector Administrator calculates the meter reading to be allocated to each Interconnector User using information on scheduled transfers which will be provided by the GB system operator[39]. The determination of Interconnector Scheduled Transfers is a matter for an Interconnection Agreement between the Interconnected System Operator and the Externally Interconnected System Operator[40]

- an Interconnector Error Administrator has to be appointed for each Interconnector. The Interconnector Error Administrator has allocated two Interconnector BM Units which are used to settle any imbalance between the scheduled transfer of the Interconnector and the actual transfer of the Interconnector[41]. This imbalance is then allocated outside the BSC arrangements, according to agreements between the Interconnector Error Administrator and the Interconnector Users

- a new Interconnector cannot be energised without an Interconnector Administrator and an Interconnector Error Administrator in place. If either of these parties should cease to exist[42] then effectively trade across the interconnector has to cease and there are default arrangements for the Interconnected System Operator (which in the case of a transmission connected Interconnector would be the GB system operator) to become the Interconnector Error Administrator to settle any inadvertent transfers

[38] K5.1.2 and K5.3.1.
[39] R7.4.
[40] R7.1.3.
[41] T4.1.
[42] K5.4.6.

- the provision for "System-to-system" flows[43] enables system operators to make arrangements outside the arrangements for scheduling flows on behalf of Interconnector Users for purposes such as security or system stability, and

- those with agreements to trade across the interconnector register in the BSC as Trading Parties and register Interconnector BM Units.

5.67. The only difference which is proposed for the GB BSC, which is a consequence of the generic changes explained above, is that the Interconnected System Operator would be the GB system operator in the case of a transmission connected interconnector. Therefore, in the case of the Moyle Interconnector, the GB system operator would be responsible for the metering of the Moyle Interconnector. An Interconnector Error Administrator and an Interconnector Administrator would also need to be appointed in respect of the Moyle Interconnector. There is not expected to be any change with respect to other Interconnectors to England and Wales.

5.68. Respondents noted that there could be difficulty in applying the BSC interconnector rules to the Moyle interconnector. It should be noted that other existing interconnectors cannot fully utilise all of the trading opportunities available to other Trading Parties with plant located within the Total System. However, restrictions on the ability of interconnector users to fully use those market trading arrangements are reflected in the use of interconnector agreements rather than the BSC. Ofgem/DTI propose that no specific changes are required to the BSC provisions concerning interconnectors.

5.69. Views are invited on the application of the existing interconnector rules in particular with respect to the Moyle interconnector.

Transmission losses

5.70. When energy flows across a transmission system a proportion is lost in transit. The total amount of transmission losses is primarily determined by the geographical pattern of generation and demand, the voltage of transmission and characteristics of the components that make up the transmission system. A

[43] R7.5.

consequence of these losses is that more energy must be exported on to the transmission system than is imported off the transmission system, and commercial arrangements are required to account for the energy lost.

5.71. The arrangements for the commercial treatment for losses in England and Wales are set out in the BSC. In Scotland, the arrangements are contained in the Settlement Agreement for Scotland (SAS). Further arrangements in respect of losses incurred by flows over the Anglo-Scottish Interconnector are contained within the relevant Use of Interconnector Agreement.

5.72. This section summarises the different sets of arrangements currently in place across GB, and discusses the implications of applying a single treatment based on the current England and Wales arrangements across GB.

Treatment of losses in England and Wales

5.73. The commercial treatment of transmission losses in England and Wales is defined in Section T of the BSC.

5.74. Transmission losses are allocated to BSC Parties, pro rated according to their physical flows on to and off the transmission system. Typically, BM Unit Metered Volumes representing exports on to the system are scaled down, whilst BM Unit Metered Volumes representing imports off the system are scaled up. The scaling factors are calculated ex-post such that, in each Settlement Period, the scaled flows on to the system and the scaled flows off the system are balanced.

5.75. The relative degree to which generation is scaled down as compared to demand being scaled up is chosen such that, broadly speaking, 45% of losses are allocated to BM Units exporting on to the system, whilst the remaining 55% is allocated to BM Units importing off the system. The exception is that BM Units that are exporting but which belong to Trading Units that are, in aggregate, importing are scaled up. This provides net treatment for the Trading Units in respect of losses by, in effect, crediting the BM Unit exports with the losses that have been charged to the equivalent volume of imports. Likewise, BM Units that are importing but which belong to Trading Units which are, in aggregate, exporting are scaled down.

5.76. The reduction is made through the application of a Transmission Loss Multiplier (TLM) to each BM Unit. In each Settlement Period there are two values of TLM, depending on whether the BM Unit Metered Volume is being scaled up or down. Typically Metered Volumes are scaled up by approximately 0.9% or down by 0.7%.

Treatment of losses in Scotland

5.77. In Scotland, the SAS provides for the scaling up of demand by factors for each GSP Group which are determined ex-ante, and whose values reflect the level of losses incurred without accounting precisely for the level of losses in each particular Settlement Period.

5.78. The loss factors applied under the SAS are determined by each transmission licensee under the terms of its licence, and are published in its statement of charges for the use of its transmission system.

5.79. The factors applying in 2002/3 are 1.026 (ie 2.6%) in SHE Transmission Ltd.'s area, and 1.021 (ie 2.1%) in SP Transmission Ltd.'s area.

5.80. "Between Area Generator Trades", where an Independent Generator[44] sells to a party in the adjacent area, are also scaled down by these same factors.

Treatment of losses across the Scotland-England interconnector

5.81. For exports by Independent Generators out of Scotland across the Anglo-Scottish Interconnector, the SAS provides for a further factor, which is also published under the terms of the transmission licence. For both SP Transmission Ltd. and SHE Transmission Ltd., this factor is 1.031 (ie 3.1%). Conversely imports into Scotland are scaled by the inverse of this factor.

5.82. No such scaling is applied to exports or imports of the Host Companies across the interconnector, albeit that these companies that have to make good any shortfall.

[44] This includes a Host Company operating outside its area.

Application of England and Wales arrangements to GB

5.83. If the treatment of losses as currently provided in the BSC were applied on a GB basis then all exports and imports onto and off the transmission system would be scaled using factors derived ex-post such that the total of scaled exports and of scaled imports (taking into account the net treatment of Trading Units) would balance.

5.84. The implications of this would include the following:

- Scottish generation would be scaled down, but Scottish demand would be scaled up by less. Because of this effect an adjustment would be required to compare GB prices and historic Scottish or England and Wales prices on a like-for-like basis
- on the assumption that the current published factors in Scotland broadly reflect the true level of losses, then because Scottish losses are typically higher than England and Wales losses, the transmission losses recovered from users of the Scottish transmission systems, ie the aggregate of scaling demand up and generation down, will be lower than the losses incurred on the Scottish transmission systems. However, by the same token, there will be (and are now) regions of the England and Wales transmission system where losses are under-recovered and other regions where losses are over-recovered
- because of the use of an ex-post factor representing "live" losses, Scottish demand would see greater variability in losses, albeit the overall level would be lower
- the host generating companies in Scotland will no longer carry the risk/reward of the discrepancy between actual losses and the assumed, ex-ante figure
- losses charged on independent generation in Scotland supplying demand in England and Wales would be substantially reduced from 5.7% to around 0.8%, and

- given that transmission in Scotland includes the 132kV system, the application of a common Transmission Loss Multiplier across the GB system would result in 132 kV connected generation and demand in Scotland being scaled by the GB-wide TLM, whereas generation and demand connected at 132kV in England and Wales would additionally have Line Loss Factors applied to reflect losses on the distribution system as well as the transmission system.

5.85. Ofgem/DTI would welcome views on the issues raised above consequent to applying the current England and Wales treatment of transmission losses on a GB basis via a GB BSC. In particular, Ofgem/DTI would welcome views on the averaging of losses across the whole GB system, such that higher losses on the Scottish transmission systems would be shared by all GB users. It is anticipated that the increase in losses for England and Wales would be 0.05%.

5.86. In February 2002 Ofgem published proposals[45] for the introduction of zonal transmission loss factors, whereby additional scaling of exports and imports would be applied to reflect the effect on overall losses of exports and imports at different locations. There are two modification proposals[46] currently being progressed in relation to the BSC in England and Wales which propose an amendment to the arrangements for charging for transmission losses under the BSC.

5.87. These modification proposals have been considered by a Modification Group and the Panel and Modification Reports are in preparation for consideration at the December Panel meeting.

5.88. At this juncture, Ofgem is not making any assumptions as to whether provisions will be included at some future time in the BSC to implement locationally varying loss factors.

Pool supplement

5.89. The purpose of the Pool Supplement was to provide for the run-off of the Pooling and Settlement Agreement and the associated final settlement for the

[45] Transmission Access and Losses under NETA – revised proposals, Ofgem February 2002.
[46] P75 'Introduction of zonal transmission losses' and P82 'Introduction of zonal transmission losses on an average basis'.

settlement days outstanding when the BSC was introduced. It is understood that this final reconciliation process has now been completed therefore it would appear that there is no longer a need for the Pool Supplement to continue. However, the purpose of the BETTA project is to only secure those changes to the BSC considered necessary or expedient for BETTA, therefore it is not proposed to amend the BSC to remove provisions relating to the Pool Supplement. BSC parties are free to raise a modification to do so, however, if they so choose.

Other issues

5.90. Views are invited on any other matters not raised above concerned with the application of the England and Wales BSC to GB or changes required to the BSC to effect GB coverage.

Appendix 1 : A description of the existing balancing and settlement arrangements

1.1 The England and Wales trading arrangements are based on bilateral trading of electricity contracts between generators, suppliers, traders and customers. They operate as far as possible like other commodity markets whilst, at the same time, making provision for the electricity system to be kept in physical balance at all times to maintain security and quality of supplies. The England and Wales trading arrangements include:

- forward and futures markets that allow contracts for electricity to be struck up to several years ahead
- short-term power exchanges which give participants the opportunity to "fine tune" their contract positions
- a balancing mechanism, which opens at Gate Closure (1 hour before real time), in which the National Grid Company, as System Operator, accepts offers of and bids for electricity to help it to balance the transmission system, and
- a settlement process for charging participants whose notified contracted positions do not match their metered volumes of electricity, for the settlement of accepted balancing mechanism offers and bids, for recovering certain of the system operator's costs of balancing the system and for distributing any surplus or deficit arising from a two part imbalance cashout.

1.2 The BSC covers the arrangements for these last two items. It sets down the arrangements for the settlement of certain actions taken in order to assist NGC in balancing the system in real time, and the settlement of imbalance energy, defined broadly as the difference between the notified contractual and physical energy positions of participants.

1.3 As well as achieving an overall physical balance of electricity supply and demand, the system operator may also need to accept bids and/or offers from generators and/or suppliers at short notice to maintain the quality and security

of supply, including changing the generation/demand balance at different locations to overcome transmission constraints. In addition to the acceptance of bids and offers in the balancing mechanism, the system operator can also contract in longer timescales, outside the balancing mechanism, for the provision of balancing services where it proves efficient to do so.

1.4 The BSC includes: requirements for metering systems to be installed to measure the imports and exports of electricity on and off the total system; arrangements for the collection and aggregation of metered data; arrangements for profiling of customer demand, metered data estimation and reconciliation; the requirements for notifying bilateral contractual positions; credit requirements; communication requirements to support information exchange between Trading Parties, NGC as Transmission Licensee and other BSC Agents; arrangements for submission of bids and/or offers into the balancing mechanism; the calculation of imbalance volumes and imbalance prices; and general governance of the BSC itself.

1.5 A proposal to modify the BSC may be submitted by any BSC party (other than the BSCCo or the BSC Clearer), energywatch, such other bodies representative of interested third parties as may be designated by the Authority and the Panel (in certain circumstances). The BSC Panel, assisted by ELEXON, is responsible for, amongst other things, the management of the modification process, which includes the production of a report to the Authority in relation to each proposed modification. The BSC Panel's report to the Authority includes a recommended implementation date together with a recommendation as to whether any changes to the BSC should be made in relation to the proposed modification or any alternative if identified. After having had regard to its statutory duties and assessing each modification against the applicable BSC objectives set down in NGC's transmission licence, the Authority can then direct that the proposed modification or any identified alternative should be made or give notice to parties that the proposed modification or an identified alternative should not be made to the BSC.

1.6 Under Section 9 (2) of the Electricity Act 1989 Transmission licensees are required "to develop and maintain an efficient, co-ordinated and economical system of electricity transmission." For Scottish transmission licensees, in meeting these obligations, each licensee must take balancing actions. Such balancing actions are often by way of instructing plant owned by, or contracted

to, their affiliated generation businesses. The transmission licensees make no explicit payments for the procurement of such services.

1.7 In consequence, under the SAS rules, the output of the host generators is not recorded in the SAS and these businesses are never exposed to imbalance prices when trading with suppliers in their own area (instead they are exposed to the cost of procuring or providing balancing services). However, imbalance volumes are calculated for all independent supply and generation companies and associated imbalance prices are applied to these volumes.

1.8 All generators seeking to trade directly with suppliers must be accredited and qualified under the SAS. There are currently five generator parties qualified to make such trades. These are:

- Scottish Power Generation Ltd
- SSE Generation Ltd
- British Energy Generation (UK) Ltd
- PowerGen UK plc, and
- Grangemouth CHP Ltd.

1.9 The available contract forms under the SAS are:

- per cent of demand
- firm MW
- tranche of output, and
- per cent of output.

1.10 The first two contract forms are the only forms available for trades with Scottish Power Generation Ltd and SSE Generation Ltd. If suppliers contract using a contract form other than 100 per cent of demand from the host generation business then the supplier and generator must each sign a residuals contract with the host. Suppliers can use contracts with the host generators, in

conjunction with contracts from independent generators, in order to minimise imbalance volumes.

1.11 Under the SAS, contract volumes between independent generators and suppliers are registered and compared to actual energy generated or consumed. Imbalance volumes arise when a party's contracted position differs from its physical position. If the party is short of generation then the party has to buy the shortfall from the host at a regulated top-up price. If the party has an excess of generation, then the host purchases the excess volume at the regulated spill price. Such imbalance volumes are settled separately, for each settlement area, on a half hourly basis.

1.12 Since Vesting, as part of the approved trading arrangements, Scottish Power and Scottish and Southern Energy have agreed with Ofgem the Scottish wholesale price cap and top-up and spill prices to apply to the imbalance volumes incurred by independent generators and suppliers. Full details of the present administered pricing arrangements are set out in a recent Ofgem document[47].

1.13 One of the key principles of BETTA is the introduction of arrangements for the wholesale trading of electricity across GB, consistent with the present NETA arrangements in England and Wales. To achieve this, it is necessary to introduce a unified set of trading arrangements for balancing generation and supply across GB and for settling imbalances. It is envisaged that the way in which this will be achieved is through the introduction of a new BSC, based on that then in place in England and Wales, to apply across the whole of GB.

1.14 Under a GB BSC, it is envisaged that there will be a single balancing mechanism for the submission of bids and offers from all BM Units across GB. The GB system operator will procure offers and bids in the balancing mechanism and other balancing services to assist it in balancing the system. The GB system operator will be provided with financial incentives to balance the system efficiently and will not be allowed to discriminate in its procurement or use of balancing services.

1.15 One consequence of this will be that there is no longer a requirement for existing transmission licensees separately to balance generation and demand in

[47] " Scottish administered prices for the period 27 May 2001 to 31 March 2002" Ofgem May 2001.

their respective areas. Instead balancing will be achieved simultaneously on a GB-wide basis, with all generators and demand competing with other generation and demand in GB to provide balancing services.

1.16 As with the current BSC in England and Wales, Trading Parties will be required to notify their contractual positions prior to gate closure. Any differences between notified contractual positions and actual generation and actual demand will constitute imbalance volumes that will be settled at either a GB System Buy Price or a GB System Sell Price, depending upon whether a party is short or long of energy. It is expected that this will result in the introduction of trading in GB energy products on power exchanges and in bilateral contracts markets for bulk electricity, akin to the England and Wales arrangements that presently apply.

1.17 The current administered prices for top-up and spill will therefore cease to apply in Scotland. In addition any imbalances of the Scottish host generation and supply businesses will be calculated and settled in an identical manner to other generators and suppliers in GB.

Appendix 2 : Consideration of the transmission owner role in the BSC

2.1 To assist in the consideration of possible roles in the GB BSC for transmission owners, the existing roles of Distribution System Operator[48] (DSO) and Transmission Company in the England and Wales BSC have been examined. These roles cover the only interfaces in the BSC concerned with networks. DSOs currently manage networks which are part of the Total System to which the BSC applies without, on the main interconnected system, the responsibility of system balancing. In the case of references to the Transmission Company, only those references which are not directly related to the governance of the BSC, system operation or connection activities are considered as it is proposed that these functions will transfer to the GB system operator.

2.2 DSO roles in the BSC are:

- right to attend and speak (but not vote) at Panel
- provides information to BSCCo to confirm Party applications
- provides data to determine black start compensation and manifest error compensation
- DSO de-energise defaulting party's plant
- registers etc metering at Distribution Systems Connection Points, Distribution Interconnector Boundary Points and Grid Supply Points (GSP)
- submits line loss factors for metering systems in their GSP group
- provides information to the Panel about Generation Capacities and Demand Capacities
- provides aggregation rules for registered meters

[48] Note a DSO is a Public Distribution System Operator (the holder of a Distribution Licence and successor to the Public Electricity Supply licensees) or a private distributor.

- PDSO is notified of faulty metering and can witness metering tests
- estimates Unmetered Supply, and
- obtains data for Distribution System operation, Distribution Use of System and connection charges.

Most of these roles arise either from distribution system connection activity, distribution system operation activity or metering responsibilities. A transmission owner may be called on to take part in the de-energisation of a defaulting party's plant but see below for further consideration of this.

2.3 Transmission Company roles in the BSC not directly connected to operating the BSC or the Balancing Mechanism are associated with de-energisation or interconnectors such as:

- Transmission Company de-energise defaulting party's plant
- the Interconnected System Operator acts as meter registrant for transmission connected Interconnectors, and
- appointment as Interconnector Error Administrator under default conditions ie where no Interconnector Error Administrator has been voluntarily appointed.

Of the above tasks, it is expected that the responsibility for instructing de-energisation of defaulting party's plant will rest with the GB system operator with any practical arrangements between the GB system operator and transmission owners being reflected in arrangements elsewhere. The interconnector roles are considered in chapter 5.