

**NGC System Operator incentive scheme  
from April 2005**

**Final Proposals and statutory licence  
consultation**

March 2005

65/05

## Summary

This document sets out Ofgem's Final Proposals for National Grid Company plc's (NGC) Great Britain (GB) System Operator (SO) one-year incentive scheme from 1 April 2005. It also includes a statutory notice of licence modification under section 11 of the Electricity Act 1989 that is necessary to amend NGC's electricity transmission licence<sup>1</sup>, with the agreement of the licensee, to implement the Final Proposals.

NGC's existing SO incentive scheme applies to its role as SO in England and Wales (E&W). However, the British Electricity Trading and Transmission Arrangements (BETTA) are expected to go-live on 1 April 2005 and from this point NGC will undertake the role of SO across the whole of GB<sup>2</sup>. Therefore, the SO incentive scheme to be implemented as of 1 April 2005 needs to be developed within the context of NGC's role as GB SO.

The proposals presented in this document are intended to maintain and, where appropriate, enhance the incentives on NGC to operate the GB transmission system in an economic, efficient and co-ordinated manner. NGC's existing SO incentive scheme was introduced on 1 April 2004 and is intended to run until 31 March 2005. Therefore, a new incentive scheme needs to be put in place from 1 April 2005.

## ***Background***

In its role as SO, NGC is responsible for:

- ◆ ensuring that the system remains within safe operating limits and that the pattern of generation and demand is consistent with any transmission system related constraints (system balancing); and
- ◆ the residual purchasing and selling of electricity to keep the transmission system in energy balance in real time (energy balancing).

In carrying out this role, NGC incurs costs for which market participants, and ultimately customers, pay. Ofgem sets incentive schemes covering NGC's SO costs which are designed to provide appropriate financial incentives for NGC to manage these costs

---

<sup>1</sup> Appendix 1 contains a statutory notice in respect of the licence modifications. The Schedule to the notice provides a marked-up version of the proposed licence modifications.

within the incentive period. Ofgem sets a target level of costs and, if actual costs are below this target, NGC keeps a proportion of the reduction in costs as an incentive payment, whereas if costs are above target, NGC bears a proportion of the costs in excess of the target. NGC's overall gains or losses are limited by a cap on payments and a floor on losses. Therefore, NGC's SO incentive schemes are targeted at managing, on behalf of customers, the costs of operating the transmission system and the costs of balancing real time supply and demand for electricity.

Previous incentive schemes, put in place by Ofgem, have been very successful in reducing the costs of system operation on behalf of customers. Between 1994 (when the first incentive scheme was introduced) and 2001, NGC, under the incentives provided by successive schemes, reduced the annual costs of system operation by more than £400 million. Since the introduction of the new electricity trading arrangements (NETA) in 2001, NGC has, through more efficient system operation, consistently outperformed its incentive scheme target. Ofgem has, against this background, been able to reduce the incentive scheme target by around £70 million (from approximately £485 million to £415 million for the current incentive scheme). NGC and customers have therefore shared the benefits of successive schemes in improving the efficiency of system operation.

### ***Initial Consultation***

Ofgem published an Initial Consultation document<sup>3</sup> in September 2004 setting out the high-level options for the scope, form and duration of the incentive scheme from April 2005 and discussed the treatment of several specific aspects of the scheme. The views of all respondents to the Initial Consultation were taken into consideration during the development of the Initial Proposals for NGC's SO incentive scheme from 1 April 2005, discussed below.

### ***NGT's 2005/06 balancing cost projection***

National Grid Transco's (NGT)<sup>4</sup> projection of its Incentivised Balancing Costs (IBC) for 2005/06 under its new role as GBSO was £543.2 million. This projection is around

---

<sup>2</sup> On 1 September 2004, NGC was appointed as the GB SO. See the following DTI press release for details: <http://www.gnn.gov.uk/environment/detail.asp?ReleaseID=128201&NewsAreaID=2&NavigatedFromDepartment=False>

<sup>3</sup> 'NGC system operator incentive scheme from April 2005, Initial consultation document', Ofgem, September 2004.

£128 million higher than the target for the current incentive scheme (£415 million) and is over £148 million higher than NGT's own forecast of E&W balancing costs for 2004/05, which stands at £394.9 million. The overall increase of £148 million consists of approximately £61 million for the move to the GB-wide market under BETTA, just under £56 million associated with constraint costs and just over £31 million as a result of cost pressures on existing activities.

### ***Initial Proposals***

Following careful consideration of the views of respondents, including NGT, to the Initial Consultation, Ofgem published its Initial Proposals in December 2004<sup>5</sup>. Ofgem proposed that a further one year scheme, based on the existing sliding scale mechanism should be implemented from 1 April 2005. In developing its Initial Proposals, Ofgem considered that NGT's projected cost increases may overstate this uncertainty and associated risk surrounding GB balancing costs. In light of this, Ofgem considered it appropriate to develop a range of options, which provided NGC with different risk/reward profiles. The options presented ranged from a high risk and high reward scheme through to a low risk and low reward scheme. These are set out below:

<b>Proposed value<sup>6</sup></b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Target</b>	£480 million	£500 million	£515 million
<b>Upside sharing factor</b>	60%	40%	25%
<b>Downside sharing factor</b>	15%	20%	25%
<b>Cap</b>	£50 million	£40 million	£25 million
<b>Floor</b>	-£10 million	-£20 million	-£25 million

Ofgem also outlined a potential revision to the treatment of transmission losses within the SO incentive scheme, which entailed a move from a gross to a net transmission losses scheme. Ofgem considered that the introduction of a net transmission losses scheme should be considered, as it better reflects the true balancing costs to which the market is exposed.

---

<sup>4</sup> NGC is the subsidiary of NGT that holds an electricity transmission licence. In this document, references to NGC are only made in respect of licensed activities.

<sup>5</sup> 'NGC system operator incentive scheme from April 2005, Initial Proposals', Ofgem, December 2004.

<sup>6</sup> Monetary values are in money of the day.

## ***Final Proposals***

Ofgem has carefully considered the views of respondents, including NGT, in developing its Final Proposals. Ofgem continues to propose that a further one year shallow scheme, based on the existing sliding scale mechanism should be implemented from 1 April 2005.

Ofgem continues to consider that the incentive scheme parameter options presented in the Initial Proposals document provide differing but appropriate balances of risk and reward for NGC. In the Initial Proposals document, Ofgem indicated that it would be for NGC to select from the suite of options the one which it considered offers the most appropriate balance of risk and reward. Following the publication of the Initial Proposals, NGC has indicated Option 2 as its preference. Therefore, Ofgem's Final Proposal is that the incentive scheme parameters should be set on the basis of Option 2.

On the basis of the existing treatment of transmission losses within the SO incentive scheme, Option 2 had a target of £500 million. However, Ofgem's Final Proposals revise the way in which transmission losses are treated under the incentive scheme. The proposed revision entails including the net volume of transmission losses (i.e. the difference between the actual volume of transmission losses and a specified transmission losses volume target) in the incentive scheme as opposed to the gross volume of transmission losses (i.e. a projected outturn transmission losses volume) as at present. The table below shows the Final Proposals for the incentive scheme parameters, revised to reflect the proposed net treatment of transmission losses under the 2005/06 SO incentive scheme.

<b>Proposed value</b>	<b>2005/06 Final Proposals</b>
<b>Target</b>	£377.5 million
<b>Upside sharing factor</b>	40%
<b>Downside sharing factor</b>	20%
<b>Cap</b>	£40 million
<b>Floor</b>	-£20 million

Ofgem considers that the Final Proposals for the 2005/06 SO incentive scheme provide NGC with an appropriate balance of risk and reward which is in the interests of customers, who ultimately pay for the costs of system operation.

## ***Way forward***

This document incorporates a statutory notice of Ofgem's intention to modify by agreement NGC's transmission licence under section 11 of the Electricity Act 1989 to implement the proposals set out in this document.

The statutory notice under section 11 of the Electricity Act 1989 specifies a period of not less 28 days during which interested parties can make representations or objections to the proposed licence modification, following which revisions to the proposed licence modification will be made if they are considered appropriate, except where the Secretary of State directs Ofgem not to make the modifications. Responses<sup>7</sup> should be submitted in writing by 29 March 2005.

NGC must consent to the proposed licence modifications before they can be implemented. If NGC consents, Ofgem intends, subject to any representations made during the consultation and any direction received from the Secretary of State, to direct the modification of NGC's transmission licence in line with the proposed licence modifications. If NGC does not consent to the proposed licence modifications, Ofgem has the ability to refer the proposed SO incentive scheme modifications to the Competition Commission for final adjudication.

---

<sup>7</sup> 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.

# Table of contents

<b>1. Introduction</b>	<b>1</b>
Purpose of this document	1
Background	1
Related issues	8
Progress to date	12
Way forward	13
Outline of this document	14
<b>2. Summary impact assessment</b>	<b>16</b>
Issue	17
Objective	18
Policy	18
<b>3. NGC's external SO incentive schemes since the implementation of NETA</b>	<b>20</b>
Introduction	20
Background	20
NGC's performance under the SO incentive schemes since the implementation of NETA	21
Historic IBC forecasts versus outturns	25
Conclusions	26
<b>4. Responses to Ofgem's Initial Consultation</b>	<b>27</b>
Introduction	27
Ofgem's Initial Proposals	27
Respondents' views	34
NGT's view	39
<b>5. Ofgem's Final Proposals for the GB SO incentive scheme to apply from 1 April 2005</b>	<b>45</b>
Introduction	45
Scope of the GB SO incentive scheme to apply from 1 April 2005	45

Form of the GB SO incentive scheme to apply from 1 April 2005	46
Duration of the GB SO incentive scheme to apply from 1 April 2005	46
Net Imbalance Adjustment	46
Transmission Losses Adjustment	47
Incentive scheme parameters	50
Timing of BETTA go-live	54
BSC Modification Proposals and CUSC Amendment Proposals	56
Summary	59
<b>6. Licence modification</b>	<b>61</b>
<b>Appendix 1 Statutory modification notice</b>	<b>63</b>
<b>Special Condition AA5A: Revised Restrictions on Revenue</b>	<b>68</b>
<b>Special Condition AA5E: Duration of the Transmission Network Revenue Restriction and the Balancing Services Activity Revenue Restriction</b>	<b>82</b>
<b>SCHEDULE A: SUPPLEMENTARY PROVISIONS OF THE CHARGE RESTRICTION CONDITIONS</b>	<b>85</b>
<b>Appendix 2 Historic incentive scheme structure</b>	<b>95</b>
Details of the external SO incentive schemes under NETA	95
<b>Appendix 3 Incentivised Balancing Cost component breakdown</b>	<b>98</b>
Balancing Mechanism Costs (CSOBM)	98
Balancing Services Contract Costs (BSCC)	101
Transmission Losses (TL) and Transmission Losses Reference Price (TLRP)	103
Total Net Energy Imbalance Volume (TQEI) and the Net Imbalance Volume Reference Price (NIRP)	107
Other Allowed Income (RT) and Balancing Services provided to others (OM)	110
Contribution of components to IBC	111
<b>Appendix 4 Respondents to the Initial Proposals document</b>	<b>114</b>
<b>Appendix 5 BSC Modification Proposals and CUSC Amendment Proposals</b>	<b>115</b>
<b>Appendix 6 The regulatory framework</b>	<b>117</b>
Introduction	117



The Electricity Act 1989	117
The Utilities Act 2000	117
The Energy Act 2004	118
NGC's electricity transmission licence	118
Industry Codes	121

# 1. Introduction

## ***Purpose of this document***

- 1.1. This document sets out Ofgem's Final Proposals for National Grid Company plc's (NGC) Great Britain (GB) System Operator (SO) one-year incentive scheme from 1 April 2005. It also includes a statutory notice of licence modification under section 11 of the Electricity Act 1989 that is necessary to amend NGC's electricity transmission licence<sup>8</sup>, with the agreement of the licensee, to implement the Final Proposals. The proposals presented in this document are intended to maintain and, where appropriate, enhance the incentives on NGC to operate the GB transmission system in an economic, efficient and co-ordinated manner.

## ***Background***

### ***British Electricity Trading and Transmission Arrangements***

- 1.2. Ofgem and the Department of Trade and Industry (DTI) are committed to working towards the introduction of the British Electricity Trading and Transmission Arrangements (BETTA) in accordance with the timetable announced by the DTI. Ofgem announced on 18 June 2003 that the target date for go-live would be April 2005 and that the implementation of BETTA required primary legislation. Legal certainty regarding the BETTA proposals was provided following Royal Assent of the Energy Bill on 22 July 2004. It is currently anticipated that BETTA will be implemented on and from 1 April 2005.
- 1.3. In a December 2001 consultation document<sup>9</sup>, Ofgem noted that one of the principal components of BETTA was the introduction of common independent balancing arrangements across GB, through the creation of a single GB SO that

---

<sup>8</sup> Appendix 1 contains a statutory notice in respect of the licence modifications. The Schedule to the notice provides a marked-up version of the proposed licence modifications.

<sup>9</sup> 'The Development of British Electricity Trading and Transmission Arrangements (BETTA) - A Consultation Paper', Ofgem, December 2001.

is separate<sup>10</sup> from generation and/or supply interests. NGC was the sole applicant for the role of GB SO and on 17 December 2002, the then Minister for Energy and Construction, Mr Brian Wilson, stated in a response to a Parliamentary Question that, "Licensing of the GB System Operator can not take place until the necessary legislation has received Royal Assent. I am minded to accept the recommendation of the GB System Operator Selection Panel that the National Grid Company plc's application for the role of GB System Operator should be accepted<sup>11</sup>."

- 1.4. On 1 September 2004, the BETTA 'go-active' period began and NGC was appointed as the GB SO<sup>12</sup>. Therefore, as of BETTA go-live, NGC's role as a transmission business will change, as will the roles of the existing Scottish transmission businesses, SP Transmission Ltd (SPT) and Scottish Hydro-Electric Transmission Ltd (SHETL). Since go-active all three transmission licensees have licence obligations to carry out transitional activities in order to prepare for BETTA go-live.
- 1.5. Until go-live, all three transmission businesses carry out both Transmission Asset Owner (TO) and SO roles in their respective geographic areas. From BETTA go-live, NGC is to retain its TO role within E&W and to carry out its SO role across GB, thereby necessitating the development of a GB SO incentive scheme. SPT and SHETL will retain their own TO roles in their respective geographic areas and relinquish their SO roles to NGC. NGC's roles as TO and SO are discussed below.

### ***NGC's TO role***

- 1.6. In its role as TO for E&W, NGC is responsible for building and maintaining the grid infrastructure in an economic, efficient and co-ordinated manner. NGC's current TO price control is set to apply from 1 April 2001 to 31 March 2006

---

<sup>10</sup> Other than for the purpose of balancing the system under BETTA, the activity of generation or supply in GB, or of trading electricity in GB, or the carrying out of any other relevant activity which may conflict with the carrying out of the activities of the GB system operator in an independent and non-discriminatory manner, should not be undertaken by the party itself nor by any of its affiliates.

<sup>11</sup> See Hansard 17 December 2002, Official Report Column 45WS.

<sup>12</sup> See the following DTI press release for details:

<http://www.gnn.gov.uk/environment/detail.asp?ReleaseID=128201&NewsAreaID=2&NavigatedFromDepartment=False>

(however, as outlined in this chapter, this period will be extended to 31 March 2007). The proposals in this document do not materially affect the allowed revenues defined in NGC's TO price control.

### ***NGC's SO role***

- 1.7. As discussed further below, the primary responsibility for balancing lies with market participants who have commercial incentives, created by the cash out rules, to achieve energy balance. NGC's role as SO is that of the residual balancer. In its role as residual balancer, NGC, as SO, is responsible for:
  - ◆ ensuring that the system remains within safe operating limits and that the pattern of generation and demand is consistent with any transmission system related constraints (system balancing); and
  - ◆ the residual purchasing and selling of electricity to keep the transmission system in energy balance in real time (energy balancing).
- 1.8. System balancing and electricity balancing are discussed further below. Before this, the tools available to NGC for both system balancing and electricity balancing purposes are briefly summarised.
- 1.9. The Balancing Mechanism provides a tool whereby NGC, as SO, can accept offers of electricity (generation increases and demand reductions) and bids for electricity (generation reductions and demand increases) at very short notice. Bids and offers can be submitted to the Balancing Mechanism by BSC Parties, although they are not obliged to do so. A bid or offer specifies the price that the BSC Party wishes to be paid (or is willing to pay) to move away from their Final Physical Notification (FPN) and the volume by which they are prepared to move. Bids and offers are financially firm on both BSC Parties and NGC, that is to say BSC Parties are exposed to imbalance prices if they fail to deliver an accepted bid or offer and NGC has to pay BSC Parties compensation if it accepts a bid or offer and then decides it does not require it.
- 1.10. As well as the Balancing Mechanism, NGC, as SO, has commercial freedom to trade in the short term markets and can use a range of other tools to contract with generators, suppliers and customers to balance the system. It can, for

example, enter into balancing services contracts, typically option contracts that allow it to call on a service when it needs it; forward trades (typically non-locational) and Pre-Gate Closure Balancing Transactions (PGBTs). At Gate Closure<sup>13</sup>, which occurs one hour before the start of the settlement period, bilateral trading stops and NGC, in its role as SO, takes control of balancing the system.

### **System balancing**

- 1.11. NGC is responsible for system balancing and delivers against this responsibility mainly through bilateral contracts and the Balancing Mechanism, since system service requirements are often location-specific and hence can not be obtained through the non-locational traded markets. This responsibility is primarily a consequence of the lack of sufficient information and related incentives to enable participants to resolve system balancing issues without a central role being taken by NGC.
- 1.12. In principle, Ofgem would welcome any developments in this area that would enable market participants to participate more actively in balancing the network, further reducing the need for NGC's central intervention through contracting for system balancing purposes.

### **Electricity balancing**

- 1.13. Throughout the process of introducing NETA there was extensive consultation<sup>14</sup> regarding the role of NGC versus the role of the market in ensuring electricity balancing. At that time it was recognised that the role of NGC was central in

---

<sup>13</sup> Gate Closure is the last point at which Parties can notify their contractual position to NETA Central Systems and at which Parties can resubmit their Physical Notifications to NGC. After Gate Closure, NGC uses the Balancing Mechanism to enable them, amongst other things, to keep the system in electricity balance close to, and in, real time by adjusting levels of generation and demand in the light of the Bids and Offers submitted. From NETA go-live until 2 July 2002, Gate Closure was 3½ hours before real time. On 2 May 2002 the Authority accepted BSC Modification Proposal P12 ("Reduction of Gate Closure From 3.5 Hours To 1 Hour") and this modification was implemented on 2 July 2002 from which point Gate Closure was reduced from 3.5 hours to 1 hour.

<sup>14</sup> See, for example 'The new electricity trading arrangements: Volume 1: Consultation Document', Ofgem, July 1999; 'NGC System Operator incentives, Transmission Access and Losses under NETA: Consultation Document', Ofgem, December 1999.

ensuring short-term security of supply (which was defined as the period from day minus one to real time<sup>15</sup>). This was characterised as the “residual balancer” role.

1.14. Longer term security of supply is delivered by the market and the commercial incentives provided by the trading arrangements. Via exposure to imbalance prices, suppliers face commercial incentives to contract ahead of the Balancing Mechanism to meet the demands of their customers. Generators, also through exposure to imbalance prices, have an incentive to forward contract with customers for their output and to hold reserve to hedge the risks of plant failure. The arrangements give market participants freedom to choose when and how to enter into such contracts. However, imbalances left to the day will tend to be met by generators or demand side participants that have relatively high costs, compared to the prices that could have been obtained by contracting further in advance, including trading in the forward markets.

1.15. Thus, the exposure to imbalance cash-out provides commercial incentives on participants to ensure that the level of generation is sufficient to meet demand. Consequently, NGC is not required to contract in advance to ensure that generation capacity is sufficient to meet peak demand. Under NETA, market mechanisms are intended to play this role and it would not be efficient or economic for NGC to duplicate this by acting, in effect, as the provider/buyer of last resort.

1.16. NGC’s role as residual balancer is primarily defined in terms of what other market participants cannot, or cannot at present, efficiently undertake through existing trading and market mechanisms. In its role as residual balancer NGC is responsible for:

- ◆ ensuring that demand and supply are balanced on a moment by moment basis;
- ◆ managing the physical consequences of any plant failures, including commercial failures<sup>16</sup>, that occur on the network for the short period until the market is able to respond to such a failure; and

---

<sup>15</sup> See ‘The new electricity trading arrangements: Volume 1: Consultation Document’, Ofgem, July 1999 section 12.2.

- ◆ managing the physical consequences of any unexpected increases in demand for a short period until the market is able to respond to such an increase.

1.17. In order to mitigate these risks, NGC holds short-term reserve<sup>17</sup>. NGC has the commercial flexibility to procure its reserve requirements through forward tenders/contracts or options and also via the Balancing Mechanism. When assessing the level of reserve requirement and whether to procure its reserve requirements forward or via the Balancing Mechanism, NGC takes account of a number of factors including:

- ◆ the likely levels of plant margin;
- ◆ the likely levels of generator reliability; and
- ◆ the likely levels of demand forecast errors.

1.18. In planning and developing the transmission system and in order to balance the system in an economic, efficient and co-ordinated manner, as required under the terms of its transmission licence, NGC should consider the most efficient mechanism by which to deliver its obligations. In delivering against these obligations, NGC should not only consider the economic method and timing of procurement, but also the risk that it will be unable to balance the system in the short-term should the energy required to do so be unavailable close to real time. If NGC anticipates a period of system stress, it is likely that, by factoring in this risk, it would procure more balancing services ahead of time than might be suggested by narrow economic trade-offs.

1.19. NGC's SO incentive scheme provides funding for any costs efficiently incurred by NGC in procuring its reserve requirements and making provisions for eventualities to which the market cannot, or is unaware of its need to, respond.

---

<sup>16</sup> The term "commercial failure" covers the situation where a generation or supply company goes into receivership or administration. For a short period, contractual obligations may mean that generating capacity is not available to the market or that demand side services are withdrawn.

<sup>17</sup> For more information on NGC's standing reserve procurement see: [http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/6060\\_3904.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/6060_3904.pdf)

## ***NGC's SO incentives***

- 1.20. In order to allow NGC to carry out its role, the commercial arrangements provide NGC with freedom to develop and use a wide range of tools and options to balance the system in the most economic, efficient and coordinated manner. For example, NGC can buy and sell electricity in forward markets and, post Gate Closure, in the Balancing Mechanism. NGC is also free to contract for balancing services<sup>18</sup> from generators, suppliers and large customers. NGC can exercise these contracts for balancing purposes as and when they are required. NGC is required to procure any balancing services competitively and via transparent processes. In order to fulfil this requirement, NGC is obliged under standard condition C16<sup>19</sup> of its transmission licence to have in place two particular documents<sup>20</sup>; the Procurement Guidelines and the Balancing Principles Statement (the purpose of these two documents is further outlined in Appendix 6). NGC's procurement of balancing services is also constrained by a prohibition on purchasing or acquiring electricity other than for the purposes of co-ordinating and directing the flow of electricity onto and over the GB transmission system<sup>21</sup>.
- 1.21. In balancing the transmission system, NGC, in its role as SO, incurs costs for which market participants, and ultimately customers, pay. NGC's SO costs can be divided into internal and external balancing costs. NGC's internal costs include the costs of its control centre, systems and staff. External balancing costs cover the costs of balancing services contracts and electricity purchases and sales for balancing purposes. NGC has consistent incentive schemes covering both internal and external balancing costs. The internal costs incentive targets

---

<sup>18</sup> The term "balancing services" is used to cover both services purchased in the Balancing Mechanism and services contracted outside the Balancing Mechanism.

<sup>19</sup> With effect from 1 September 2004 and following modifications made by the Secretary of State to the electricity transmission licence, what was formerly referred to as special condition AA4 of NGC's transmission licence became standard condition C16 of the electricity transmission licence.

<sup>20</sup> Standard condition C16 obliges NGC to have in place four documents in total; the Procurement Guidelines (PGs), the Balancing Principles Statement (BPS), the Balancing Services Adjustment Data (BSAD) Methodology Statement and the Applicable Balancing Services Volume Data (ABSVD) Methodology Statement. Details of the PGs, the BPS, the BSAD Methodology Statement and the ABSVD Methodology Statement can be found at NGC's website [www.nationalgrid.com/uk/indinfo](http://www.nationalgrid.com/uk/indinfo).

<sup>21</sup> This prohibition is contained in standard condition C2 of NGC's transmission licence (it was formerly contained in special condition AA3 of NGC's transmission licence).



have been agreed until 31 March 2006 and will be extended for a further year<sup>22</sup>. There have been four external SO incentive schemes under NETA, details of which are provided in Chapter 3 and Appendices 2 and 3. The current external SO incentive scheme commenced on 1 April 2004 and is due to expire on 31 March 2005. Therefore, a new incentive scheme needs to be put in place from 1 April 2005.

- 1.22. NGC is currently subject to a “shallow” incentive scheme that only covers the costs of operating the transmission system. Ofgem has previously proposed a move to an enhanced, “deeper”, incentive scheme that would also include some aspects of the development of the transmission system<sup>23</sup> as is the case for Transco’s SO incentives<sup>24</sup>. Ofgem continues to consider that deepening NGC’s SO incentive scheme to be appropriate, however, as outlined in the September 2004 Initial Consultation document, Ofgem is not intending to progress such reforms as part of this consultation process.
- 1.23. Ofgem intends to develop and implement a new shallow SO incentive scheme which will enhance the existing commercial incentives for NGC to operate and develop the transmission system in an economic, efficient and co-ordinated manner, which is in the interests of customers who ultimately pay for the costs of system operation. Ofgem’s Final Proposals are discussed further in Chapter 5.

## ***Related issues***

### ***Transmission investment and renewable generation***

- 1.24. In the Government’s Energy White Paper<sup>25</sup>, one of the key goals for energy policy is to tackle the threat of climate change by reducing greenhouse gas emissions. As part of this policy, the Government is committed to stimulating growth in renewable energy sources and aims for renewables to provide ten per

---

<sup>22</sup> ‘Transmission price controls and BETTA, Draft proposals’, Ofgem, July 2004.

<sup>23</sup> See, for example, ‘NGC System Operator incentive scheme from April 2004, Proposals and statutory licence consultation’, Ofgem, February 2004.

<sup>24</sup> See ‘Transco’s National Transmission System system operator incentive 2002-7, Final proposals’ Ofgem, December 2001.

<sup>25</sup> The Energy White Paper can be found at: <http://www.dti.gov.uk/energy/whitepaper/ourenergyfuture.pdf>

cent of UK electricity supplies by 2010, with the aspiration of this figure rising to 20 percent by 2020.

- 1.25. The sites for many renewable technologies may be located in remote areas that can be some way from the existing transmission system and/or electricity customers. For increased levels of renewable generation to be delivered to the market, appropriate transmission infrastructure will need to be put in place. This is likely to entail significant extensions to the transmission system, requiring substantial additional investment in the GB transmission networks, including that of NGC.
- 1.26. An Initial Consultation in relation to the issues surrounding the appropriate regulatory treatment of any expenditure required to accommodate new renewable generation sources was published in October 2003<sup>26</sup>. The second consultation in May 2004<sup>27</sup> proposed an adjustment mechanism to supplement the existing price controls and to provide appropriate incentives for additional investment in transmission networks.
- 1.27. Ofgem produced an Initial Proposals document in relation to these issues in August 2004<sup>28</sup>. Ofgem stated that it would be necessary to establish a framework in which the level of efficient investment in the transmission network can be assessed and allowances made via appropriate mechanisms. The intention of this approach is to ensure that, once efficient justification has been adequately demonstrated, individual investment projects can proceed in a timely manner in order to avoid unnecessary delay.
- 1.28. Ofgem assessed the transmission investment proposals put forward by the transmission licensees and engaged independent consultants to provide additional analysis of these proposals. Ofgem published final proposals in December 2004<sup>29</sup>, setting out which transmission investment proposals will be necessary to ensure that forecast levels of new renewable generation can be accommodated efficiently.

---

<sup>26</sup> 'Transmission investment and renewable generation, Consultation document', Ofgem, October 2003.

<sup>27</sup> 'Transmission Investment for Renewable Generation, Second consultation', Ofgem, May 2004.

<sup>28</sup> 'Transmission Investment for Renewable Generation, Initial proposals', Ofgem, August 2004.

<sup>29</sup> 'Transmission Investment for Renewable Generation, Final Proposals', Ofgem, December 2004  
[http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/9631\\_28804.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/9631_28804.pdf)

- 1.29. The final proposals provide incentives for all three transmission licensees to invest efficiently in response to demand from generators seeking connections to the transmission and distribution networks ahead of the next price control reviews. The proposals set out the level of efficient baseline investment which Ofgem considers necessary to allow transmission licensees to respond to demand for new connections prior to the next price control reviews.
- 1.30. Ofgem will consult on the accompanying licence modifications to the transmission licensees' current price controls in early 2005.

### ***Price controls and charging under BETTA***

- 1.31. The current transmission price controls for SHETL and SP Transmission are intended to last until 31 March 2005. Ofgem is proposing to roll forward these price controls 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.
- 1.32. From BETTA go-live, the price controls of all three transmission licensees will need to be adjusted to provide remuneration according to the licensees' changed roles and responsibilities under BETTA. Ofgem published draft proposals for these price controls in July 2004<sup>30</sup>.
- 1.33. In December 2004<sup>31</sup> Ofgem published its final proposals for:
- ◆ for the price controls to apply to SP Transmission, SHETL and NGC under BETTA, excluding proposals for NGC's SO incentive scheme which is the subject of this paper, and
  - ◆ the roll forward price controls that would apply to SP Transmission and SHETL if BETTA go-live were delayed beyond 1 April 2005.
- 1.34. In February 2005, Ofgem published a section 11 notice<sup>32</sup> as part of the statutory licence consultation process to give effect to these final proposals.

---

<sup>30</sup> 'Transmission price controls and BETTA, Draft proposals', Ofgem, July 2004.

<sup>31</sup> Transmission price controls and BETTA, Final proposals and impact assessment', Ofgem, December 2004.

- 1.35. The price controls to apply under BETTA were derived by making adjustments to the controls that would apply in the absence of BETTA. Therefore in NGC's case, the price controls to apply under BETTA have been derived by making adjustments to the revenue restrictions that would otherwise apply in 2005/06; namely NGC's existing TO price control and its SO internal cost incentives.
- 1.36. Ahead of the implementation of BETTA in April 2005, NGC has brought forward proposals for its GB transmission charging methodology. On 30 September 2004 following a process of industry consultation, NGC submitted its proposals for both a GB transmission connection charging methodology and a GB transmission use of system methodology ("the September proposals") to the Authority for approval. A decision document which contained details of the Authority's decisions concerning the September proposals, together with details of the reasons the Authority reached those decisions was published on 10 December 2004<sup>33</sup>. The Authority approved NGC's proposed connection charging methodology but did not approve either of NGC's proposed use of system methodologies. In the light of that decision, NGC developed revised proposals for a GB use of system methodology and consulted on those revised proposals with the industry and, following further consultations, NGC submitted a revised proposal for a use of system charging methodology ("the January proposals") to the Authority for approval on 28 January 2005. Ofgem published an impact assessment in respect of the January proposals in February 2005<sup>34</sup>.
- 1.37. Work is also underway to ensure that an efficient mechanism of allocating capacity rights is in place. Should all requests for firm access rights to the transmission system be granted, it is likely that substantial costs could be incurred in the form of actions taken by NGC to relieve constraints. In July 2004, Ofgem issued a consultation<sup>35</sup> relating to the initial allocation of GB transmission system access rights under BETTA. The transitional arrangements are set out in transmission licence condition C18 (in relation to NGC's

---

<sup>32</sup> 'Transmission price controls and BETTA statutory licence consultation, impact assessment, and consultation on the statements of the basis of transmission owner charges', Ofgem, February 2005.

<sup>33</sup> NGC's proposed GB electricity transmission charging methodologies, The Authority's decisions, Ofgem 275/04, December 2004.

<sup>34</sup> 'The proposed transmission use of system charging methodology of the GB System Operator, An Impact Assessment', Ofgem, February 2005.

obligations to users in relation to offers for connection to and use of system of the GB transmission system) and in transmission licence condition D15 (in relation to transmission owner obligations to NGC in respect of offers for connection to and use of system of the GB transmission system).

## ***Progress to date***

### ***Initial Consultation***

- 1.38. Ofgem published an Initial Consultation document<sup>36</sup> relating to NGC's SO incentive scheme to apply from 1 April 2005. The Initial Consultation set out the high-level options for the scope, form and duration of the incentive scheme from 1 April 2005 and discussed the treatment of several specific aspects of the scheme. The views of all respondents to the Initial Consultation were taken into consideration during the development of the Initial Proposals for NGC's SO incentive scheme from 1 April 2005, discussed below.

### ***NGT's 2005/06 balancing cost projection***

- 1.39. National Grid Transco (NGT)<sup>37</sup> provided projections of its Incentivised Balancing Costs (IBC) for 2005/06. As NGC will be responsible for balancing the system on a GB-wide basis from 1 April 2005, NGT's projections cover GB IBC as opposed to just E&W IBC as in previous schemes. NGT's projections were considered carefully during the development of the Initial Proposals for NGC's SO incentive scheme from 1 April 2005, discussed below.

### ***Initial Proposals***

- 1.40. Prior to developing the Final Proposals contained in this document, Ofgem published an Initial Proposals document<sup>38</sup> relating to NGC's SO incentive scheme to apply from 1 April 2005. The Initial Proposals set out a suite of

---

<sup>35</sup> 'The initial allocation of GB transmission system access rights under BETTA, A consultation on draft legal text', Ofgem, July 2004.

<sup>36</sup> 'NGC system operator incentive scheme from April 2005, Initial consultation document', Ofgem, September 2004.

<sup>37</sup> NGC is the subsidiary of NGT that holds an electricity transmission licence. In this document, references to NGC are only made in respect of licensed activities.

<sup>38</sup> 'NGC system operator incentive scheme from April 2005, Initial Proposals', Ofgem, December 2004.

incentive scheme options, which provided differing but appropriate balances of risk and reward from which NGT could select what it considers to be the most appropriate balance of risk and reward. The options presented ranged from a high risk and high reward scheme through to a low risk and low reward scheme.

- 1.41. The contents of the Initial Consultation and the responses received are summarised in Chapter 4. Appendix 4 lists non-confidential respondents to Ofgem's Initial Proposals document. The views of all respondents to the Initial Proposals have been taken into consideration during the development of the Final Proposals presented in this document for NGC's SO incentive scheme from 1 April 2005.

## ***Way forward***

### ***Licence modification***

- 1.42. This document incorporates a statutory notice of licence modification under section 11 of the Electricity Act 1989 in order to amend NGC's electricity transmission licence, with the agreement of the licensee, to take account of the proposed changes to the SO incentive scheme for the period 1 April 2005 to 31 March 2006.
- 1.43. The statutory notice under section 11 of the Electricity Act 1989 specifies a period of not less than 28 days during which interested parties can make representations or objections to the proposed licence modification, following which revisions to the proposed licence modification will be made if they are considered appropriate, except where the Secretary of State directs Ofgem not to make the modifications. Responses should be submitted in writing by 29 March 2005.
- 1.44. Following consideration of any representations received, revisions to the proposed licence modifications will be made if it is considered appropriate. In order for the proposed licence modifications to be made, NGC is required to provide its written consent to the modifications. If this is received, Ofgem will direct the modification of NGC's transmission licence in line with the proposed licence modifications. If NGC does not consent to the proposed licence modifications, Ofgem has the ability to refer the proposed SO incentive scheme

modifications to the Competition Commission for final adjudication. If this was to occur, there would be a lapse in NGC's SO incentive arrangements from the expiry of the current SO incentive scheme pending the final adjudication of the Competition Commission.

1.45. If you wish to discuss any aspect of this document, please contact any of the following people who will be pleased to help:

- ◆ Simon Bradbury – telephone number: 020 7901 7249, fax number: 020 7901 7452, email: [simon.bradbury@ofgem.gov.uk](mailto:simon.bradbury@ofgem.gov.uk) or
- ◆ David Hunt – telephone number: 020 7901 7429, fax number: 020 7901 7452, email: [david.hunt@ofgem.gov.uk](mailto:david.hunt@ofgem.gov.uk).

### ***Consultation code of practice***

1.46. If respondents have comments or complaints about the way this consultation has been conducted these should be sent to:

Michael Fews  
Head of Licensing  
Office of Gas and Electricity Markets  
9 Millbank  
London  
SW1P 3GE  
Tel: 020 7901 7085  
[Michael.fews@ofgem.gov.uk](mailto:Michael.fews@ofgem.gov.uk)

### ***Outline of this document***

1.47. This document describes Ofgem's Final Proposals in relation to NGC's SO incentive scheme to apply from 1 April 2005. In detail, this document is structured as follows. Chapter 2 details the Summary Impact Assessment of the possible options associated with NGC's SO incentive scheme from 1 April 2005. Chapter 3 provides information in relation to NGC's performance under its SO incentive schemes since the implementation of NETA. Chapter 4 provides a

summary of the responses to Ofgem's Initial Proposals on NGC's SO incentive scheme from 1 April 2005. Chapter 5 contains details of Ofgem's Final Proposals. Chapter 6 provides information on the licence modification process associated with these Final Proposals.

- 1.48. Appendix 1 contains the statutory notice in respect of the licence modifications. The Schedule to the notice provides a marked-up version of the proposed licence modifications. Appendix 2 outlines the incentive schemes under which NGC has operated since the implementation of NETA. Appendix 3 provides a breakdown of IBC components. Appendix 4 lists non-confidential respondents to Ofgem's Initial Proposals document. Appendix 5 provides the list of BSC Modification Proposals and CUSC Amendment Proposals that Ofgem considers should be exempt from the IAE provisions under NGC's SO incentive scheme from 1 April 2005. Appendix 6 summarises the current regulatory framework within which the SO incentives are set.



## 2. Summary impact assessment

- 2.1. Section 5A of the Utilities Act 2000 applies where<sup>39</sup>:
- ◆ 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.
- 2.2. Where section 5A of the Utilities Act applies, the Authority must:
- ◆ carry out and publish 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.
- 2.3. Ofgem considers that its Final Proposals in relation to the external cost SO incentive scheme to apply from 1 April 2005 are important for the purposes of section 5A of the Utilities Act 2000. This is because the external cost SO incentive arrangements are designed to create appropriate commercial incentives for the SO to manage the costs of system operation. As these costs are faced initially by market participants and ultimately by customers, Ofgem's Final Proposals in relation to the external cost SO incentive scheme are important.
- 2.4. However, Ofgem considers that it is not necessary to publish an impact assessment and for the purposes of section 5A(3)(b) of the Utilities Act. The reasons for this are as follows:
- ◆ Ofgem's Final Proposals are the extension of the existing incentive arrangements which are presently in place in E&W to apply across GB as a consequence of the introduction of BETTA and the creation of a single GB SO;

---

<sup>39</sup> Section 5A was inserted into the Utilities Act by section 6 of the Sustainable Energy Act 2003, with effect from December 2003.

- ◆ As to the impacts on transmission users, these are dealt with in impact assessments already published by Ofgem, namely “The proposed transmission use of system charging methodology of the GB system operator – An Impact Assessment” published first on 15/10/04 and latterly on 2/2/05;
- ◆ Ofgem has consulted widely and extensively on its proposals in relation to the external cost SO incentives. Ofgem has carefully considered all responses received and has developed its Final Proposals accordingly; and
- ◆ Given that Ofgem’s Final Proposals involve extending the current structure of the incentive scheme for another year and that these proposals have received support during the extensive consultation process which has been undertaken, Ofgem has concluded that it is sufficient to prepare the Summary Impact Assessment presented in this chapter.

2.5. Notwithstanding the above, this chapter contains a summary impact assessment of its proposals for a new NGC external cost SO incentive scheme.

### ***Issue***

2.6. NGC’s existing SO incentive scheme was introduced on 1 April 2004 and is intended to run until 31 March 2005. Therefore, a new incentive scheme needs to be put in place for the period from 1 April 2005 onwards. This coincides with the expected date for BETTA go-live, from which point NGC will perform the role of SO across GB, rather than across just E&W as at present. Therefore, while NGC’s SO incentive schemes to date have been developed for its SO role in E&W, NGC’s SO incentive scheme intended to apply from 1 April 2005 has been developed for its GB SO role.

2.7. NGC has been subject to incentives to control the costs of balancing the system since 1994. Prior to the introduction of incentive schemes, these costs were passed straight through to customers. In the four years since privatisation, these costs had doubled in real terms to £509 million per annum. Between April 1994 (when the first incentive scheme was introduced) and the introduction of

NETA in March 2001, NGC reduced the annual costs of system operation by more than £400 million. Since NETA, NGC has consistently managed the costs of system operation such that it has, through more efficient system operation, outperformed its incentive scheme target. This has benefited both NGC in terms of the rewards that it has received under the incentive arrangements and customers who ultimately face the costs of system operation and so benefit from a proportion of the cost savings achieved by NGC. The benefits to customers have been enhanced further via successive reductions in the incentive scheme target value (Ofgem has, against this background, been able to reduce the incentive scheme target by around £70 million (from approximately £485 million to £415 million for the current incentive scheme)). Thus, the schemes have resulted in real benefits to customers, who ultimately pay the costs of system operation.

## ***Objective***

- 2.8. The objective of the SO incentive scheme is to create appropriate commercial incentives for the SO to manage the costs of system operation on behalf of customers. The SO incentives are intended to benefit customers in two ways. Firstly, they align the interests of NGC with those of customers and, secondly, they transfer some of the risks associated with higher balancing costs from customers to NGC who is better placed to manage them on customers' behalf. In setting a new SO incentive scheme, Ofgem aims to ensure that these objectives continue to be met and that, as far as is practicable, the incentives on NGC are enhanced.

## ***Policy***

- 2.9. In the Initial Proposals document, Ofgem outlined a suite of proposals, which provided differing but appropriate balances of risk and reward, from which NGC could select what it considered to be the most appropriate balance of risk and reward. The options presented ranged from a high risk and high reward scheme through to a low risk and low reward scheme. Ofgem's Initial Proposals in relation to the further one year SO incentive scheme from 1 April 2005 are outlined in Table 2.1.

**Table 2.1 – Incentive scheme options (money of the day)**

<b>Proposed value</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Target</b>	£480 million	£500 million	£515 million
<b>Upside sharing factor</b>	60%	40%	25%
<b>Downside sharing factor</b>	15%	20%	25%
<b>Cap</b>	£50 million	£40 million	£25 million
<b>Floor</b>	-£10 million	-£20 million	-£25 million

2.10. Ofgem also outlined a potential revision to the treatment of transmission losses within the SO incentive scheme, which entailed a move from a gross to a net transmission losses scheme. Ofgem considered that the introduction of a net transmission losses scheme should be considered, as it better reflects the true balancing costs to which the market is exposed. Table 2.2 below details the incentive scheme options outlined above, including net treatment of transmission losses.

**Table 2.2 – Incentive scheme options with a net losses incentive (money of the day)**

<b>Proposed value</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Target</b>	£357.5 million	£377.5 million	£392.5 million
<b>Upside sharing factor</b>	60%	40%	25%
<b>Downside sharing factor</b>	15%	20%	25%
<b>Cap</b>	£50 million	£40 million	£25 million
<b>Floor</b>	-£10 million	-£20 million	-£25 million

2.11. Ofgem considered that its Initial Proposals struck an appropriate balance between providing NGC a reasonable balance of risk and reward whilst protecting customers' interests by agreeing a proportionate and reasonable target.

2.12. Following consideration of the views of respondents to the Initial Proposals, Ofgem has developed its Final Proposals for NGC's SO incentive scheme from 1 April 2005. These Final Proposals and the rationale behind them are discussed further in Chapter 5.

## 3. NGC's external SO incentive schemes since the implementation of NETA

### *Introduction*

- 3.1. This chapter provides a background to the Final Proposals set out in this document by outlining NGC's performance under the first four external cost incentive schemes under NETA. Details of the structure of these incentive schemes are provided in Appendix 2. Further details of NGC's performance under the schemes are provided in Appendix 3.

### *Background*

- 3.2. Under the external SO incentive schemes that have been in place since NETA was introduced, NGC is allowed to recover the actual costs of electricity balancing and system balancing, adjusted by incentive payments or receipts relating to these costs. The value of any incentive payments or receipts depends upon NGC's performance in relation to a cost target set in advance.
- 3.3. If NGC's costs are below the target, it keeps a proportion (set by the upside sharing factor) of the reduction in costs as an incentive payment. Conversely, if its costs are above the target, NGC is charged a proportion (set by the downside sharing factor) of the costs in excess of the target. NGC's overall gains or losses on its balancing costs are limited by applying a cap on payments and a floor on losses. This type of scheme is called a sliding scale or profit sharing scheme. In setting incentive scheme targets, sharing factors, caps and floors, Ofgem aims to provide NGC with an appropriate balance of risk and reward in the interests of customers.

## ***NGC's performance under the SO incentive schemes since the implementation of NETA***

### ***Annual IBC***

3.4. NGC has performed well against the targets that have been set by Ofgem for each of its incentive schemes under NETA to date. As a consequence, NGC has received incentive payments to reward this performance within the terms of these incentive schemes. However, the incentive schemes that NGC has been subject to have seen consistent reduction in the costs that NGC recovers from its customers. The incentive schemes, therefore, provide substantial cost savings for market participants and customers alike. Table 3.1 provides details of the target values of IBC, the actual end of year IBC, the cost saving between actual and target IBC, and the incentive payment that NGC has received or paid.

**Table 3.1 – NGC's performance under each incentive scheme (money of the day)**

Parameter	2001/02 scheme <sup>40</sup>	2002/03 scheme	2003/04 scheme	2004/05 scheme	
	Actual outturn			Straight line extrapolation <sup>41</sup>	NGT's forecast outturn
Target IBC	£484.6 million to £514.4 million	£460.0 million	£416.0 million	£415.0 million	
Outturn IBC	£365.6 million	£379.0 million	£351.5 million	£394.6 million	£394.9 million
Cost saving (overrun) vs target <sup>42</sup>	£119.0 million	£81.0 million	£64.5 million	£20.4 million	£20.1 million
NGC's incentive reward (payment)	£46.3 million	£48.6 million	£32.2 million	£8.2 million	£8.0 million

3.5. In the initial incentive period under NETA, IBC totalled approximately £366 million. As a result, NGC received the maximum (cap) payment of £46.3

<sup>40</sup> The figures presented in relation to the initial incentive scheme represent the finalised parameters for the scheme following adjustments to reflect that the scheme was 370 days in duration, not 365 days, and inflation indexation at 1.5 per cent.

<sup>41</sup> This straight line extrapolation is based on data from 1 April 2004 to 31 December 2004.

million under its SO external cost incentive. This reflected the fact that, over the first year of NETA, NGC substantially reduced the level of SO costs and therefore its performance was rewarded under its incentive scheme. The growing experience of operating under NETA has allowed Ofgem to set lower target values in successive years. As a result of the substantial reduction in SO balancing costs, Ofgem has been able to set the target for the current SO external cost incentive around £70 million lower than the original incentive scheme target.

- 3.6. In the second incentive period, IBC totalled £384.3 million by year end but was reduced by £5.34 million to stand at £379 million as a result of an approved Income Adjusting Event (IAE)<sup>43</sup>. NGC's incentive payment was £48.6 million for the second incentive period (increased by £3.2 million from £45.4 million as a result of the approved IAE)<sup>44</sup>.
- 3.7. In the third incentive scheme period, IBC totalled almost £357.1 million by year end compared to a target of £416 million, but was reduced by £5.54 million to stand at £351.5 million as a result of an approved IAE. NGC's incentive payment was £32.2 million for the third incentive scheme period (increased by £2.77 million from £29.5 million as a result of the approved IAE)<sup>45</sup>.
- 3.8. Under the current incentive scheme period, a straight line extrapolation of the available IBC data until 31 December 2004<sup>46</sup> (cumulative IBC was £297.3

---

<sup>42</sup> The sharing factors built into the SO incentive arrangements allow for a proportion of these savings (overruns) to be passed onto (borne by) customers. As savings have been made to date, the proportion of these cost savings to be passed onto customers was set at 60 per cent for 2001/02, 40 per cent for 2002/03, 50 per cent for 2003/04 and 60 per cent for 2004/05.

<sup>43</sup> The IAE provisions are intended to provide protection for both NGC and customers in the event that an incident results in costs or savings which were not envisaged at the time that the SO incentive parameters were defined. As the event could not be envisaged, no allowance for costs or savings linked to such incidents is made within the SO incentive scheme target. NGC, or any other BSC Party, can give notice to Ofgem that they consider an IAE to have occurred where they consider that the costs and/or expenses caused or saved by the IAE have affected NGC's IBC by more than £2 million. The £2 million threshold does not apply if the IAE is a security period as defined in special condition AA5D of NGC's transmission licence.

<sup>44</sup> See 'Income adjusting event under NGC's 2002/03 system operator incentive scheme: A consultation document', Ofgem, May 2003 and 'Income adjusting event under NGC's 2002/03 system operator incentive scheme: A decision document', Ofgem, June 2003. These documents can be found on Ofgem's website at [www.ofgem.gov.uk](http://www.ofgem.gov.uk)

<sup>45</sup> See 'Income adjusting event under NGC's 2003/04 system operator incentive scheme: A consultation document', Ofgem, May 2004 and 'Income adjusting event under NGC's 2002/03 system operator incentive scheme: A decision document', Ofgem, July 2004. These documents can be found on Ofgem's website at [www.ofgem.gov.uk](http://www.ofgem.gov.uk)

<sup>46</sup> Please note that this extrapolation is only based on nine months of data.

million for this period) yields a cost of £394.6 million over the entire incentive period. This would equate to NGC receiving around £8.2 million, significantly below the maximum allowable payment (cap) of £40 million. NGC has forecast that outturn IBC for the current incentive period will total £394.9 million. This forecast outturn would equate to NGC receiving around £8 million.

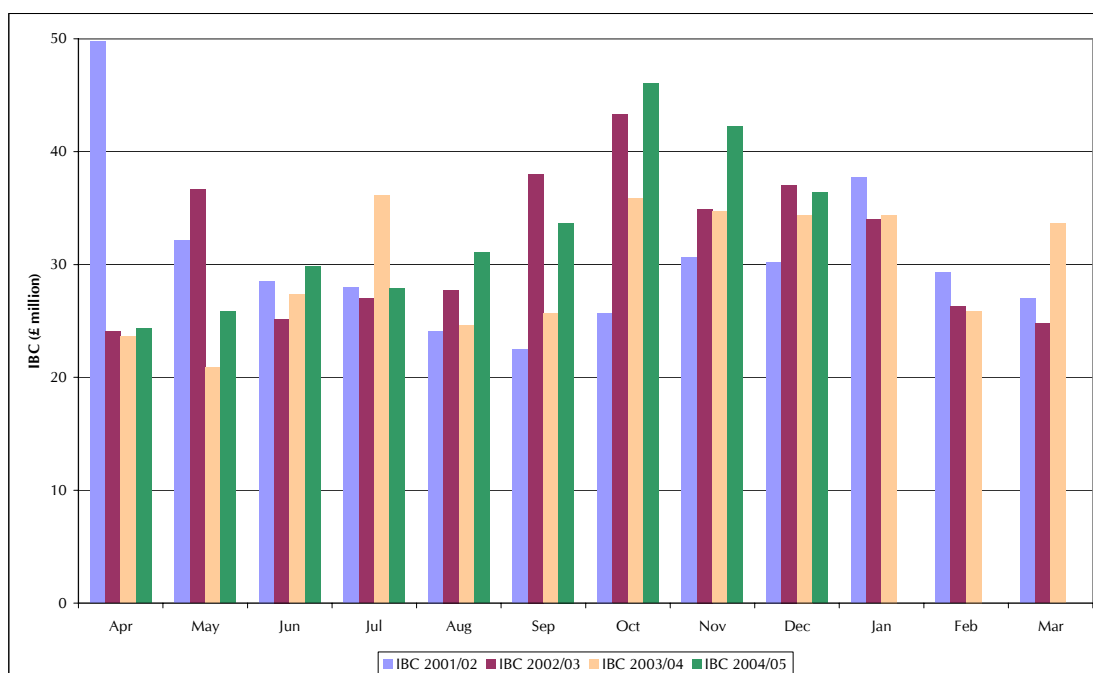
- 3.9. NGC has made good progress in reducing the overall level of SO costs since NETA go-live and has accordingly received incentive rewards during these periods. The cost savings achieved are beneficial to customers, who ultimately bear the costs of system operation. The benefits to customers have been enhanced further via successive reductions in the incentive scheme target value.

### ***Within-year IBC***

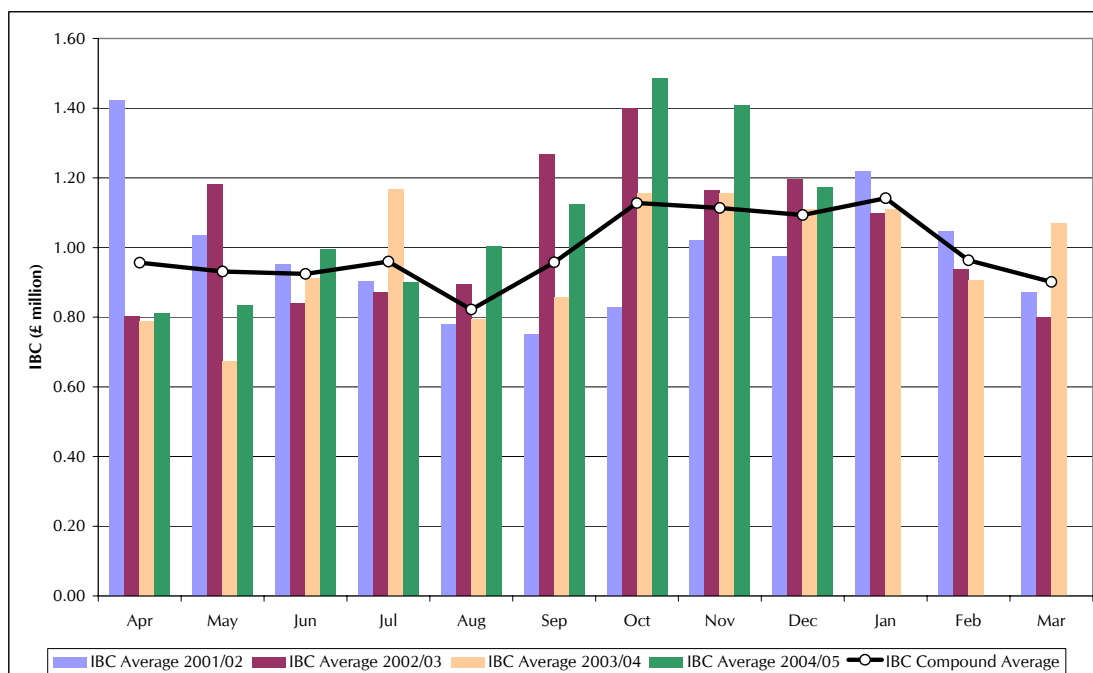
- 3.10. NGC's performance against its incentive scheme depends in part upon the market conditions that prevail during the relevant incentive scheme period. For example, one would expect IBC to be higher in a particularly cold year than a mild year as a consequence of the effect that weather has on the demand for electricity. Equally a particularly hot year could put upward pressure on IBC as air conditioning is a large component of electricity demand. In addition to seasonal conditions that affect the demand for electricity, IBC is affected by changes in the supply of electricity. Where the availability of generation plant is scarce, one would expect IBC to be pushed upward. Via these supply and demand fundamentals, the value of IBC is heavily influenced by the time of year and generator behaviour. Over time, however, NGC has gained greater experience and is better equipped to deal with these fundamentals and make cost savings. To illustrate, total IBC and daily average IBC both on a monthly basis under each incentive scheme are shown in Figures 3.1 and 3.2.



**Figure 3.1 – Monthly IBC under each incentive scheme (money of the day)<sup>47</sup>**



**Figure 3.2 – Daily average IBC by month under each incentive scheme (money of the day)<sup>48</sup>**



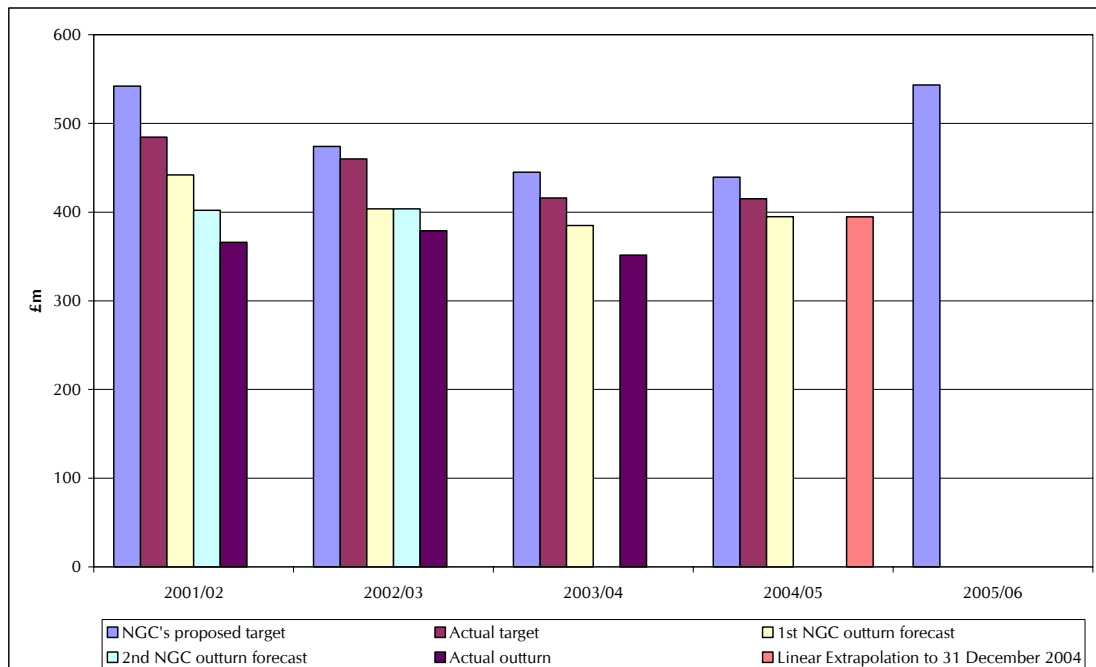
<sup>47</sup> Data for March 2001 is added to data for April 2001 in this graph.

<sup>48</sup> Data for March 2001 is added to data for April 2001 in this graph. The IBC compound average is based on producing averages for 365 days (e.g. for 1 April, average 1 April 2001, 1 April 2002, 1 April 2003 and 1 April 2004), then averaging this by month.

## Historic IBC forecasts versus outturns

- 3.11. Under each incentive scheme since NETA go-live, NGC has used essentially the same methodology to produce forecasts of IBC for the forthcoming incentive scheme period. The methodology is based on using historic data to forecast future costs.
- 3.12. An examination of the three incentive scheme periods for which complete end of year data is available shows that NGC's proposed target for IBC has been between 25 per cent and 48 per cent higher than the actual outturn figure for IBC. In addition, NGC's first forecast of IBC once the incentive scheme has commenced has been between seven per cent and 21 per cent higher than the actual outturn figure for IBC. For illustrative purposes, Figure 3.3 provides a representation of NGC's IBC forecasts<sup>49</sup>, Ofgem's proposed IBC target, and end of incentive scheme period IBC outturn. In addition, the chart includes a straight line extrapolation of outturn IBC for incentive scheme 2004/05, based on data to end December 2004, and NGC's forecast for IBC under BETTA.

**Figure 3.3 – Comparison of forecast and outturn IBC under each incentive scheme (money of the day)<sup>50</sup>**



<sup>49</sup> Where these forecasts have been provided.

<sup>50</sup> There is no second NGC forecast for 2003/04.

## ***Conclusions***

- 3.13. NGC has made good progress in reducing the overall level of SO costs since NETA go-live. This is likely, at least in part, to reflect NGC's improved understanding of operating the system under NETA and its response to the incentives. The cost savings achieved are beneficial to customers, who ultimately bear the costs of system operation. The benefits to customers have been enhanced further via successive reductions in the incentive scheme target value.
- 3.14. In the first year under NETA, IBC totalled approximately £366 million and NGC received the maximum incentive payment of £46.3 million. The second incentive scheme set a lower target and higher upside sharing factor, with IBC totalling £379 million (after the approved IAE) compared to a target of £460 million. Consequently, NGC received a payment of £48.6 million. The third incentive scheme adopted symmetric sharing factors, thereby providing NGC with the same proportion of risk and reward. As a result, IBC for 2003/04 fell to £351.5 million (also following an approved IAE), relative to a target of £416 million. Consequently, NGC received a payment of £32.2 million. Under the current scheme, a linear extrapolation of the costs to end December 2004 suggests that IBC may be over £20 million lower than the target, despite recent increases in IBC, while NGC's forecast of outturn IBC similarly suggests a value around £20 million below the target. However, it is worth noting that there are still three full months of the current incentive scheme remaining.
- 3.15. Under each incentive scheme to date, NGC has been able to manage the operation of its transmission system such that its IBC has, by the end of the incentive scheme period, been substantially lower than its proposed target in advance of the relevant incentive scheme and its initial forecast figure following the commencement of the relevant incentive scheme.

## 4. Responses to Ofgem's Initial Consultation

### *Introduction*

- 4.1. This chapter summarises Ofgem's Initial Proposals as presented in the December 2004 document and outlines non-confidential views provided by respondents, including those of NGT, in relation to the issues raised within the document. A list of the non-confidential respondents to the Initial Proposals is provided in Appendix 4<sup>51</sup>.

### *Ofgem's Initial Proposals*

#### ***Scope of the GB SO incentive scheme to apply from 1 April 2005***

- 4.2. Ofgem considered that the existing scope of the E&W SO incentive scheme (i.e. covering all electricity and system balancing costs which are within the SO's control) provided an appropriate basis upon which to develop GB SO incentive arrangements and as such proposed that it should be retained.

#### ***Form of the GB SO incentive scheme to apply from 1 April 2005***

- 4.3. Ofgem continued to consider that it is appropriate for NGC's SO incentive scheme to be a sliding scale scheme, with a single target value and symmetry between the cap and floor values and between the sharing factors. However, Ofgem considered that there may be some uncertainty associated with the level of balancing costs under BETTA, although significantly less than was the case ahead of NETA go-live for the following reasons (as outlined in the Initial Consultation and the Initial Proposals):

---

<sup>51</sup> Copies of the non-confidential responses have been placed in Ofgem's library and are available on the Ofgem website at: [http://www.ofgem.gov.uk/ofgem/whats-new/archive.jsp?section=whats-new&levelids=,1\\_9123&upper=2005&lower=2004#top9123](http://www.ofgem.gov.uk/ofgem/whats-new/archive.jsp?section=whats-new&levelids=,1_9123&upper=2005&lower=2004#top9123).

- ◆ that NGC and market participants more generally now have approximately three and a half years of experience of operating under the trading arrangements which were introduced at NETA go-live and which will be extended at BETTA go-live;
- ◆ that in advance of NETA go-live, the SO incentive arrangements were being developed to apply within the context of new trading arrangements, whereas, as part of BETTA, the existing arrangements are being extended to apply across GB rather than being developed afresh; and
- ◆ the relative sizes of the E&W and Scottish sections of the GB market (in 2003/04 peak demand was 53.1GW in E&W compared to 5.9GW in Scotland and installed capacity was 65.1GW in E&W compared to 12.2GW in Scotland).

4.4. As explained in the December 2004 Initial Proposals document, to the extent that uncertainty exists, Ofgem considered it appropriate for this to be reflected in the form of the SO incentive arrangements. As such, the menu of incentive schemes presented by Ofgem included options which had asymmetric cap, floor and sharing factors as measures to reduce the downside exposure of the incentive scheme relative to the upside reward in order to accommodate any perceived uncertainty in relation to GB SO costs.

***Duration of the GB SO incentive scheme to apply from 1 April 2005***

4.5. Ofgem proposed that the GB SO incentive scheme to run from 1 April 2005 should be one year in duration. Looking forward, however, Ofgem remained of the view that the duration of NGC's SO incentive schemes should be lengthened and made consistent with the duration of NGC's TO price control.

## ***Incentive scheme parameters***

### **Net Imbalance Adjustment**

- 4.6. Ofgem proposed that the licence drafting describing the calculation of the Net Imbalance Adjustment (NIA) parameter should be revised to reflect that there is now only one market index data provider in this respect. Ofgem proposed that the price adjusters should remain unchanged for the incentive scheme to apply from 1 April 2005. However, Ofgem outlined that it expects to review these parameters in the context of future SO incentive schemes.

### **Transmission Losses Adjustment**

- 4.7. Ofgem proposed the creation of a single Transmission Losses Adjustment (TLA), under which NGC would have a single GB transmission losses volume target and a Transmission Losses Reference Price (TLRP) which would be applied consistently to the finalised GB transmission losses target. Ofgem proposed that TLRP should be set to reflect market prices for the 2005/06 period at the time that the Final Proposals are developed.
- 4.8. Ofgem also outlined a potential revision to the way in which TLA<sup>52</sup> feeds into overall IBC. At present the gross value of losses feeds into IBC as follows:

$$IBC = CSOBM + BSCC + (TL*TLRP) + (TQEI*NIRP) - RT - OM$$

- 4.9. An alternative option proposed was to include the net value of losses in IBC as follows, where TLT is the Transmission Losses Target:

$$IBC = CSOBM + BSCC + ([TL-TLT]*TLRP) + (TQEI*NIRP) - RT - OM$$

- 4.10. Ofgem outlined that gross and net treatment of losses are identical in terms of their incentive properties, whilst the net scheme offers the advantage that IBC outturn and target values more accurately reflect the costs actually borne by customers.

---

<sup>52</sup> At present, TLA is calculated as  $TL*TLRP$ .

## Target

- 4.11. Ofgem outlined potential cost savings relative to NGT's projected target for the 2005/06 incentive scheme of £543.2 million and considered that there was justification for a lower target value. As outlined in the December 2004 Initial Proposals Document, Ofgem considered that a target range between £467.8 million and £482.4 million may be more appropriate.
- 4.12. On this basis and in recognition of the potential uncertainty surrounding the level of SO costs under BETTA, Ofgem proposed a range of incentive scheme options with differing risk and reward profiles. The proposed targets within these options are set out in Table 4.1 below in the context of a gross transmission losses scheme.

**Table 4.1 – Proposed target values (money of the day)**

Proposed value	Option 1	Option 2	Option 3
Target	£480 million	£500 million	£515 million

- 4.13. The target value in Option 1 sits towards the upper end of the target range outlined above, reflecting the uncertainty associated with these cost savings at this stage. The remaining two options have targets located between the target range identified above and NGC's mean forecast of £543.2 million. Ofgem considered that the target range presented above is appropriate given the need to balance the desire to provide a reasonable and proportionate target which both reflects NGC's experience as SO in E&W and accommodates any uncertainty associated with GB balancing costs in the first incentive period post-BETTA go-live.

## Sharing factors, cap and floor

- 4.14. In principle, Ofgem continued to consider that there should be symmetry between the sharing factors and between the cap and floor values, as this represents an appropriate balance between the interests of customers and NGC. However, for each of the proposed target values outlined above, Ofgem proposed specific cap and floor values and sharing factors such that there is a range of appropriate incentive scheme options with differing but appropriate balances of risk and reward profiles. The intention was for NGT to choose from

the menu the option that it considers to offer the most appropriate balance of risk and reward. Ofgem’s proposed cap and floor values and sharing factors are outlined in Table 4.2.

**Table 4.2 – Proposed sharing factors, cap and floor values (money of the day)**

<b>Proposed value</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Upside sharing factor</b>	60%	40%	25%
<b>Downside sharing factor</b>	15%	20%	25%
<b>Cap</b>	£50 million	£40 million	£25 million
<b>Floor</b>	-£10 million	-£20 million	-£25 million

4.15. Therefore, consistent with the approach adopted for the NETA go-live SO incentive scheme, Ofgem’s Initial Proposals included several incentive scheme options with differing levels of risk and reward. The options presented ranged from a high risk and high reward scheme through to a low risk and low reward scheme.

4.16. In addition, Ofgem proposed that the internal and external SO incentive scheme sharing factors should continue to be aligned in order to ensure consistency between the schemes. Ofgem considered that setting the same sharing factors for the internal and external SO incentives ensures that NGC’s interests are aligned with those of customers by giving NGC incentives to reduce the total costs of system operation rather than arbitraging its position between the different incentive schemes.

### **Incentive scheme options – summary**

4.17. Table 4.3 below details the incentive scheme options outlined above, including gross treatment of transmission losses.

**Table 4.3 – Incentive scheme options (money of the day)**

<b>Proposed value</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Target</b>	£480 million	£500 million	£515 million
<b>Upside sharing factor</b>	60%	40%	25%



<b>Proposed value</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Downside sharing factor</b>	15%	20%	25%
<b>Cap</b>	£50 million	£40 million	£25 million
<b>Floor</b>	-£10 million	-£20 million	-£25 million

4.18. Table 4.4 below details the incentive scheme options outlined above, including net treatment of transmission losses.

**Table 4.4 – Incentive scheme options with a net losses incentive (money of the day)**

<b>Proposed value</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
<b>Target</b>	£357.5 million	£377.5 million	£392.5 million
<b>Upside sharing factor</b>	60%	40%	25%
<b>Downside sharing factor</b>	15%	20%	25%
<b>Cap</b>	£50 million	£40 million	£25 million
<b>Floor</b>	-£10 million	-£20 million	-£25 million

### ***Timing of BETTA go-live***

4.19. In the event that BETTA go-live is not implemented on 1 April 2005 as anticipated, Ofgem proposed an approach which involved rolling over the existing E&W scheme until the delayed BETTA go-live date at which point the GB SO incentive scheme would automatically apply. This required profiling of:

- ◆ the annual target, cap and floor values parameters in the rolled over E&W SO incentive scheme to derive an appropriate value for the period over which it applies ahead of actual BETTA go-live; and
- ◆ the annual target, cap and floor values parameters in the GB SO incentive scheme to derive an appropriate value for the period over which it applies after actual BETTA go-live.

4.20. Ofgem suggested two possible profiling factors. One option was to use a profiling factor similar to that used in the initial incentive scheme under NETA in

order to accommodate a scheme which was more or less than one year in duration. This NETA profiling factor (NPF) was as follows:

$$NPF = \frac{ND}{365}$$

4.21. Where:

- ◆ ND was given by the number of days, between and including the day on which BETTA go-live occurred, up to and including 31 March 2006.

4.22. The second option was a slightly more complex variant which, to the extent that IBC exhibits seasonality, attaches a greater weight to winter days than summer days. If, for example, 45 per cent of IBC is incurred in the summer period (1 April to 30 September inclusive) and 55 per cent of IBC is incurred in the winter period (1 October to following 31 March inclusive), weightings could be developed as follows:

$$NPF = \frac{(NDS * PFS) + (NDW * PFW)}{365}$$

- ◆ NDS is given by the number of days in the summer period, between and including the day on which BETTA go-live occurred, up to and including 30 September 2005;
- ◆ PFS is the summer period profiling factor which is set at 0.9<sup>53</sup>;
- ◆ NDW is given by the number of days in the winter period from and including 1 October 2005 to the BETTA go-live date; and
- ◆ PFW is the winter period profiling factor which is set at 1.1<sup>54</sup>.

### ***BSC Modification Proposals and CUSC Amendment Proposals***

4.23. Ofgem outlined its view that the IAE provisions should not be available for BSC Modification Proposals and CUSC Amendment Proposals considered during the

---

<sup>53</sup> 0.9 is derived as follows:  $((0.45 * 365) / 183)$ , where 0.45 is the proportion of IBC incurred in the summer period, 365 is the number of days in the year and 183 is the number of days in the summer period.

development of the incentive arrangements. Ofgem outlined that it proposed to specify as part of its Final Proposals a list of BSC Modification Proposals and CUSC Amendment Proposals for which the IAE provisions will not apply. This measure in no way prejudices any decision or otherwise fetters the discretion of the Authority in respect of the Modification Proposals/Amendment Proposals.

### ***Information concerning NGC's role as SO***

- 4.24. Ofgem noted existing sources of information provided to market participants relating to NGC's performance in its role as SO. Ofgem did not raise any issues in relation to the level of information provision in its Initial Proposals but instead invited any feedback that market participants may wish to make in relation to the level of information provision concerning NGC's activities and its performance as SO.

### ***Respondents' views***

- 4.25. Ofgem received thirteen responses, including a response from NGT, to its Initial Proposals. One of the responses received was marked as confidential. All non-confidential responses have been published on Ofgem's website<sup>55</sup>. A summary of views of only the non-confidential respondents is provided below, followed by a summary of NGT's views.

### ***Scope of the GB SO incentive scheme to apply from 1 April 2005***

- 4.26. The majority of the respondents who directly commented considered that the scope of the existing E&W scheme should be retained for the forthcoming GB SO incentive scheme. However, several respondents considered that work should be carried out to ensure that the scope of the SO incentive arrangements remains appropriate in the future. One of these respondents highlighted deep SO incentive schemes as an area for development going forward. Several of the

---

<sup>54</sup> 1.1 is derived as follows:  $((0.55 * 365) / 182)$ , where 0.55 is the proportion of IBC incurred in the winter period, 365 is the number of days in the year and 182 is the number of days in the winter period.

other respondents considered that there should be a greater focus on those areas where NGC can make a demonstrable reduction in costs rather than those costs which are uncertain and over which NGC has limited influence.

### ***Form of the GB SO incentive scheme to apply from 1 April 2005***

- 4.27. In general, respondents continued to consider that the current sliding scale incentive scheme should be retained within a single GB-wide SO incentive scheme. However, one respondent was of the view that a sliding scale incentive scheme encourages NGC to submit a conservative estimate of IBC and then profit from costs which outturn below this level.
- 4.28. Comments in relation to the target, sharing factors and cap and floor values are outlined below.

### ***Duration of the GB SO incentive scheme to apply from 1 April 2005***

- 4.29. All respondents who commented on this issue considered that it was appropriate for the forthcoming SO incentive scheme to be one year in duration. However, several of these respondents considered that a longer term incentive scheme was desirable in theory and should be considered for future schemes.

### ***Incentive scheme parameters***

#### **Net Imbalance Adjustment**

- 4.30. The respondent who provided comments in relation to NIA raised no objections to the proposals to revise the derivation of NIRP to reflect the merger of the United Kingdom Power Exchange (UKPX) and the Automated Power Exchange (APX) and to leave the price adjuster parameters unchanged.

---

<sup>55</sup> Copies of the response are available on the Ofgem website and have been placed at the following location: [http://www.ofgem.gov.uk/ofgem/whats-new/archive.jsp?section=whats-new&levelids=,1\\_9123&upper=2005&lower=2004#top9123](http://www.ofgem.gov.uk/ofgem/whats-new/archive.jsp?section=whats-new&levelids=,1_9123&upper=2005&lower=2004#top9123) and have been placed in Ofgem's library.

## **Transmission Losses Adjustment**

- 4.31. A number of respondents supported the inclusion of transmission losses within the SO incentive arrangements and agreed that a single GB volume target and a single TLRP value should be used. However, one of these respondents considered that there was limited potential for NGC to significantly influence transmission losses. In addition, another respondent highlighted that it had concerns in relation to the way in which transmission losses were factored into the SO incentive scheme, but considered that these should be explored in the context of future incentive schemes.
- 4.32. The majority of respondents who commented on the proposed move to a net transmission losses scheme were supportive. These respondents agreed that a net losses scheme would be more reflective of the actual Balancing Services Use of System (BSUoS) costs to which participants are exposed and so would offer greater transparency. One of these respondents offered qualified support on the basis that the costs to NGC, and hence end users, associated with the change were minimal. However, one respondent did not consider that the proposed move to a net transmission losses scheme had much merit. This respondent considered that retaining the existing gross treatment of transmission losses better reflects the total effect of transmission losses on customers and would maximise transparency in respect of trends in total balancing costs levels.

## **Target**

- 4.33. Several respondents considered that NGT had historically over-forecast IBC and that its forecast for 2005/06 may overstate the uncertainty associated with GB balancing costs. In light of these concerns, these respondents highlighted that it was important for Ofgem to set a realistic yet challenging target.
- 4.34. Several respondents favoured low cost targets. However, some respondents considered that the target values contained within the options presented by Ofgem were too generous. One of these respondents suggested a target value of £450 million while another suggested a target value of £470 million. In this context, three respondents considered that the IAE provisions could be used by NGC to seek an adjustment in the event that costs incurred can justifiably be shown to exceed the allowances made when setting the target.

- 4.35. All respondents who commented agreed with Ofgem that the re-introduction of a deadband target value should be avoided.

### *Constraints*

- 4.36. In terms of the allowance for constraint costs, one respondent considered that NGT's forecast in relation to the Cheviot boundary (the existing Anglo-Scotland interconnector) was excessive. This respondent pointed to a forecast of constraint costs of £19 million provided by NGT in its "Technical Review of Connection Options" published on 4 July 2004. On this basis, the respondent considers that Ofgem's proposed allowance for the Cheviot boundary constraint costs appeared reasonable.

### *CUSC Amendment Proposal CAP047*

- 4.37. In respect of the allowance contained within the overall target in relation to CAP047<sup>56</sup>, one respondent considered that NGT's forecast impact on frequency response costs was excessive and suggested that a more reasonable short-term expectation would be in the range of 10 per cent to 20 per cent.

### **Sharing factors, cap and floor**

- 4.38. The majority of respondents outlined their preference for symmetrical sharing factors and symmetrical cap and collar values. Of these, several considered that any uncertainty associated with GB balancing costs did not warrant a deviation from symmetry in these respects in the absence of a demonstrable asymmetry of risk. However, a number of the respondents in support of the principle of symmetry acknowledged that the inclusion of asymmetric sharing factors and asymmetric cap and floor values may be appropriate in the initial GB SO incentive scheme to reflect any uncertainty surrounding GB balancing costs. One respondent in support of this approach highlighted that it was important to return to symmetry in these respects in future schemes.
- 4.39. One respondent considered that the existing sharing factors of 40 per cent on both the upside and the downside should be retained on the basis that these

values provide an appropriate balance of risk between industry and NGC. Three respondents considered that more modest sharing factors, which would be sufficient to provide NGC with an incentive to manage balancing costs while limiting the proportion of any savings made to be retained by NGC, should be introduced. In a similar vein, another respondent considered that symmetrical sharing factors of 25 per cent or less would be appropriate.

- 4.40. In terms of cap and floor values, one respondent suggested that a cap of £30 million and a floor of -£30 million would provide a fair scheme. Another respondent suggested a narrow cap and floor of +/-£10 million

### ***Timing of BETTA go-live***

- 4.41. The respondents who commented on this issue considered that the proposed approaches offered a pragmatic solution in the event that BETTA go-live is delayed.

### ***BSC Modification Proposals and CUSC Amendment Proposals***

- 4.42. The respondent who commented directly on this issue agreed that it was appropriate to specify a list of BSC Modification Proposals and CUSC Amendment Proposals for which the IAE provisions will not be available. This respondent also considered that Ofgem should be more challenging in its treatment of IAEs. One other respondent highlighted its concerns regarding the number of IAEs that have occurred under NETA. This respondent indicated that these concerns were heightened by the uncertainty surrounding the treatment of CAP048 and the disparity between Ofgem's and NGC's views in relation to CAP047.

### ***Information concerning NGC's role as SO***

- 4.43. Several respondents considered that more information should be published during the year in relation to NGC's performance against the SO incentive

---

<sup>56</sup> CUSC Amendment Proposal CAP047: "Introduction of a competitive process for the provision of Mandatory Frequency Response".

scheme. On the issue of information disclosure, one respondent highlighted that NGC should be obliged to provide:

- ◆ a range of charts for total IBC and component costs, providing year on year comparisons at monthly or weekly resolution;
- ◆ a clear high level explanation of why costs behaved as they did; and
- ◆ a tabular comparison of previous incentivised years.

### ***NGT's view***

#### ***Scope of the GB SO incentive scheme to apply from 1 April 2005***

- 4.44. NGT agreed that the scope of the existing E&W incentive scheme provides an appropriate basis on which to develop the GB SO incentive arrangements.

#### ***Form of the GB SO incentive scheme to apply from 1 April 2005***

- 4.45. NGT considered that Ofgem's proposals of a sliding scale incentive scheme with possible asymmetry in the caps, floors and sharing factors is an appropriate way to accommodate the uncertainty surrounding BETTA.
- 4.46. NGT agreed with Ofgem that it would be undesirable to develop a separate Scotland incentive scheme as it would be both difficult to implement and may have the potential to create perverse incentives.

#### ***Duration of the GB SO incentive scheme to apply from 1 April 2005***

- 4.47. NGT continued to support the development of longer-term incentive arrangements in principle, but given the uncertainty surrounding BETTA, NGT agreed with Ofgem's proposal to implement a one-year scheme to run from 1 April 2005.



## ***Incentive scheme parameters***

### **Net Imbalance Adjustment**

- 4.48. NGT agreed with Ofgem's proposal not to revise the current price adjuster components of NIA, as additional uncertainty would be undesirable. NGT expressed a desire to continue to work towards refining this area going forward.

### **Transmission Losses Adjustment**

- 4.49. NGT agreed with Ofgem that it should be subject to a single GB-wide transmission losses scheme. NGT also considered that it may be necessary to revise the Transmission Losses Reference Price so that it remains aligned with the forward cost of energy.
- 4.50. NGT agreed with Ofgem that a net value of transmission losses will provide a more accurate indication of the costs that customers are exposed to through BSUoS charges.

### **Target**

- 4.51. NGT considered that Ofgem has made a number of unreasonable assumptions in generating its range of target values. NGT's reasons for this assertion are split into the following areas:

#### *Starting Point*

- 4.52. NGT considered that Ofgem's range of values from £361 million to £371 million does not represent a feasible target for end of year IBC for 2004/05. A linear extrapolation from end December 2004 generates a value of £396.1 million. Were the actual IBC values up to end December 2004 augmented with the historic average costs for January, February and March, this would give an end of year projection of £391.3 million, whilst taking the three lowest cost months under NETA for January, February and March would give £384.5 million. NGT therefore considered that Ofgem's range is around £25 million too low.
- 4.53. NGT suggested that it may be appropriate to use the mid point of Ofgem's range of, £366 million, and use this as a baseline for the IBC starting value for E&W for

the 2005/06 incentive scheme. The target for IBC could then be revised upwards if actual IBC is higher than £366 million, and downwards if actual IBC is lower than £366 million.

### *Constraints*

- 4.54. NGT considered that cost savings made in the 2003/04 incentive scheme mainly came about as a result of substantial price differentials between the GB wholesale power price and that on the continent and new NGT constraint-management initiatives. NGT considered that it may not be possible to replicate some of these initiatives in E&W in 2005/06 and is of the view that £20 million remains a viable cost target.
- 4.55. NGT re-asserted its view that it has no experience of constraint management in Scotland, and that there is considerable uncertainty over the likely level and timing of windfarm generation in Scotland. NGT expressed that it would be unreasonable to assume that constraint management in E&W and in Scotland are comparable. NGT considered the extent to which it will be able to make use of its constraint management tools in Scotland is unclear, and therefore continues to consider its target of £17 million is appropriate.
- 4.56. NGT considered that Cheviot constraints are likely to be substantial as a consequence of granting access to the transmission system to all applicants that applied before January 2005. NGT considered that Ofgem's potential cost saving of 50 per cent in Cheviot constraints was somewhat arbitrary, and requested further clarification from Ofgem. NGT suggested that it was unclear whether some constraint management tools will be available to it under BETTA as would be the case in E&W.

### *Forward Prices*

- 4.57. NGT did not agree with Ofgem's views that NGT's forecast of forward prices in its scenarios is higher than the long term trend would suggest is supportable. NGT considered that it would be premature to suggest that the recent reduction in forward prices represents a downward trend.
- 4.58. NGT also disagreed with Ofgem's view that 60 per cent of NGT's scenarios ascribe a value of £30/MWh or greater is unreasonable. NGT re-stated that its

scenarios included some prices in excess of £30/MWh, but that the probabilistic mean of the scenarios was £29/MWh.

#### *CAP047*

- 4.59. NGT considered that a 50 per cent increase in the holding prices submitted by generators under CAP047 continues to be realistic. NGT considered that a 50 per cent increase in prices compares favourably to the bid market under NETA. NGT explained that the bid market is comparable to the response market, and witnessed an increase in prices of around 100 per cent above cost reflective levels, despite a similar level of competition in the two markets.
- 4.60. NGT considered that its forecast 50 per cent increase in the cost of response provisions following the introduction of CAP047 is a reasonable expression of the risks faced.
- 4.61. NGT considered that the risks of large cost increases as a result of the introduction of CAP047 could best be dealt with via the IAE provisions.

#### *Supplemental Standing Reserve Tender*

- 4.62. NGT noted that its Standing Reserve tender for 2005/06 shows that there is limited competition for the provision of the service in Scotland. NGT, therefore, disagreed with Ofgem's view that it is likely that the increased pool of generation when procuring around 850MW of Supplemental Standing Reserve (SSR) will result in lower prices than NGT has forecast. NGT considered that on the basis of the Standing Reserve tender for 2005/06 in which 2,900MW were procured at an average price of £22/kW, it would not be feasible to derive the cost savings that Ofgem has suggested may be possible for the SSR tender in 2005/06.
- 4.63. NGT considered that its forecast of £17.6/kW for 2005/06, which has been reflected in its forecast IBC, is extremely conservative, and considers that Ofgem's proposed £14/kW is extremely unlikely.

### *Interconnector Flows*

- 4.64. NGT disagreed with Ofgem's views that the high forward prices (and resulting price differentials with the continent) assumed in NGT's scenarios would bring about a larger import from France across the French Interconnector than has been included in NGT's forecasts. NGT considered that on the basis of average flows over a season, its forecast flows are reasonable as the daily variations in flows rarely result in full export or import.

### *Headroom*

- 4.65. NGT considered that there is no evidence to suggest that moving to BETTA will arrest the long term downward trend in the volume of free headroom available to the SO. NGT considered that the main drivers in falling headroom are more efficient plant despatch and consolidation in the market. NGT considers that there is still evidence of improving despatch and continuing consolidation.

### **Sharing factors, cap and floor**

- 4.66. As mentioned earlier, NGT considered that the uncertainty surrounding BETTA may be accommodated by the use of asymmetric cap, floor and sharing factors. NGT welcomed Ofgem's proposal to utilise asymmetry in its proposals, although NGT did not agree with the proposed target levels.

### ***Timing of BETTA go-live***

- 4.67. NGT welcomed Ofgem's proposal to utilise option 1 to address a delay in the implementation of BETTA. NGT considered that rolling over the existing England and Wales scheme until BETTA go-live would be appropriate and that the second more complex profiling factor could be applied to the GB balancing costs following BETTA go-live.

### ***BSC Modification Proposals and CUSC Amendment Proposals***

- 4.68. NGT agreed with Ofgem that the IAE provisions should not be exercisable in cases where certain assumptions have been factored into NGT's forecast of balancing costs. However, NGT did not consider that CAP047 should be

included in such a list should Ofgem's view of the costs involved remain substantially different to NGT's.

- 4.69. In addition NGT expressed a view that its current forecast of balancing costs does not take account of having to accept bids and offers at prevailing prices in the event of an emergency instruction or the operation of an intertrip.

***Information concerning NGC's role as SO***

- 4.70. NGT did not comment on this matter.

## **5. Ofgem's Final Proposals for the GB SO incentive scheme to apply from 1 April 2005**

### ***Introduction***

- 5.1. This chapter outlines Ofgem's Final Proposals in relation to NGC's external SO incentive scheme from 1 April 2005. The proposals are intended to maintain and, where appropriate, enhance the incentives on NGC to operate the GB transmission system in an economic, efficient and co-ordinated manner, which is in the interest of customers, who ultimately pay for the costs of system operation.
- 5.2. These proposals have been developed in light of NGC's operational experience under NETA, analysis undertaken in relation to NGT's projections of 2005/06 balancing costs and respondents' views to the Initial Proposals.

### ***Scope of the GB SO incentive scheme to apply from 1 April 2005***

- 5.3. Ofgem remains of the view that the existing scope of the E&W SO incentive scheme (i.e. covering all electricity and system balancing costs which are within the SO's control) provides an appropriate basis upon which to develop GB SO incentive arrangements. Ofgem notes that this was also the view of the majority of respondents. Therefore, Ofgem's Final Proposal is that the scope of the existing E&W scheme should be retained for the forthcoming GB SO incentive scheme.
- 5.4. Ofgem notes that several respondents considered that work should be carried out to ensure that the scope of the SO incentive arrangements remains appropriate for future schemes. As part of the development of future SO incentive schemes, Ofgem expects to carefully consider this issue.

## ***Form of the GB SO incentive scheme to apply from 1 April 2005***

- 5.5. Ofgem continues to consider that it is appropriate for NGC to have a single GB-wide sliding scale SO incentive scheme. Ofgem notes that the majority of respondents agreed with this view. Therefore, Ofgem's Final Proposal is for there to be a GB-wide sliding scale SO incentive scheme from 1 April 2005.
- 5.6. In principle, within the sliding scale format Ofgem's preference is for there to be a single target value and symmetry between the cap and floor values and between the sharing factors. Ofgem's actual proposals in relation to the incentive scheme parameters for the SO incentive scheme to apply from 1 April 2005 are discussed in subsequent sections.

## ***Duration of the GB SO incentive scheme to apply from 1 April 2005***

- 5.7. Ofgem proposes that the GB SO incentive scheme to run from 1 April 2005 should be one year in duration. Ofgem agrees with the majority of respondents who considered that the lack of operational experience under BETTA makes it difficult to develop a two year scheme at this stage. Looking forward, however, Ofgem remains of the view that the duration of NGC's SO incentive schemes should be lengthened and made consistent with the duration of NGC's TO price control, as outlined in the September 2004 Initial Consultation and the December 2004 Initial Proposals document.

## ***Net Imbalance Adjustment***

- 5.8. Ofgem proposes to revise the rules describing the calculation of the Net Imbalance Adjustment (NIA) parameter following the merger of UKPX and APX to reflect that there is now only one market index data provider in this respect<sup>57</sup>. Ofgem is not, at this stage, proposing any revisions to the existing NIA price

---

<sup>57</sup> Please note that the licence drafting has been revised to reflect the fact that the UKPX brand has been retained for the merged entity.

adjusters. However, Ofgem expects to review these parameters in the context of future SO incentive schemes.

## ***Transmission Losses Adjustment***

### ***Net treatment of transmission losses***

- 5.9. In the Initial Proposals document, Ofgem outlined a potential revision to the way in which TLA feeds into overall IBC. This entailed including the net volume of transmission losses (i.e. the difference between the actual volume of transmission losses and a specified transmission losses volume target) in IBC as opposed to the gross volume of transmission losses (i.e. a projected outturn transmission losses volume) as at present. Ofgem considered that both treatments are consistent in terms of their incentive properties while the net treatment of transmission losses offered benefits in terms of transparency, as it would mean that both the incentive scheme target and outturn IBC would more accurately reflect the costs actually borne by customers, as TLA does not actually form a direct component of BSUoS charges.
- 5.10. Ofgem notes that the majority of respondents who commented on this issue were supportive of the proposal to have net treatment of transmission losses as they agreed that a net losses scheme would be more reflective of the actual BSUoS costs to which participants are exposed. Ofgem notes that one of these respondents was supportive on the basis that the costs associated with the change were minimal. Ofgem notes, however, that one respondent considered that the proposed change in treatment of transmission losses would affect parties' ability to assess overall trends in balancing costs.
- 5.11. Ofgem considers that the issues raised by the respondents who either offered qualified support or opposed the proposed revision can be addressed as follows:
- ◆ NGC has indicated that the costs associated with the proposed change are less than £15k; and
  - ◆ historical IBC information strands can be revised to reflect net treatment of transmission losses in order to enable parties to assess overall trends in balancing costs. Ofgem expects that this information will be presented



in the context of consultations on future SO incentive schemes. In the meantime, Table 5.1 below shows the difference between target IBC in the previous and existing SO incentive schemes when the net value of losses is included versus when the gross value of losses is included. In addition, Table 5.2 compares gross TLA outturn versus net TLA outturn for NGC's previous SO incentive schemes.

**Table 5.1 – Impact of gross value of losses versus net value of losses on SO external cost incentive target since NETA go-live (money of the day)**

Parameter	2001/02 scheme <sup>58</sup>	2002/03 scheme	2003/04 scheme	2004/05 scheme
Target IBC with gross TLA allowance	£484.6 million to £514.4 million	£460 million	£416 million	£415 million
Gross TLA allowance	5.05TWh * £20.30/MWh = £102.5 million	5.05TWh * £18.50/MWh = £93.4 million	4.50TWh * £17.00/MWh = £76.5 million	4.53TWh * £21.00/MWh = £95.1 million
Target IBC with net TLA allowance	£382.1 million to £411.9 million	£366.6 million	£339.5 million	£319.9 million

**Table 5.2 – Gross TLA versus net TLA under SO external cost incentives since NETA go-live (money of the day)<sup>59</sup>**

Parameter	2001/02 scheme	2002/03 scheme	2003/04 scheme
Gross TLA outturn	4.50TWh * £20.30/MWh = £91.4 million	4.37TWh * £18.50/MWh = £80.8 million	4.51TWh * £17.00/MWh = £76.7 million
Net TLA outturn	(4.50TWh – 5.05TWh) * £20.30/MWh = -£11.2 million	(4.37TWh -5.05TWh) * £18.50/MWh = -£12.6 million	(4.51TWh – 4.50TWh) * £17.00/MWh = £0.2 million
Gross TLA outturn minus gross TLA allowance	£91.4 million - £102.5 million = -£11.1 million	£80.8 million - £93.4 million = -£12.6 million	£76.7 million - £76.5 million = £0.2 million

5.12. Therefore, Ofgem agrees with the majority of respondents that the proposed revision of transmission losses should improve transparency by more accurately reflecting the costs that customers actually face and as such is proposing to revise the treatment of transmission losses as outlined in the Initial Proposals. In order to give effect to this, Ofgem's Final Proposals include a revision of the

<sup>58</sup> The figures presented in relation to the initial incentive scheme represent the finalised parameters for the scheme following adjustments to reflect that the scheme was 370 days in duration, not 365 days, and inflation indexation at 1.5 per cent.

<sup>59</sup> Outturn information in relation to 2004/05 is not available as yet.

definition of IBC within the transmission licence to include a Transmission Losses Target (TLT) term as follows:

$$IBC = CSOBM + BSCC + ([TL-TLT]*TLRP) + (TQEI*NIRP) - RT - OM$$

### ***Transmission losses volume target***

- 5.13. Ofgem notes that there was support for a GB-wide treatment of transmission losses under the SO incentive scheme. Therefore, Ofgem's Final Proposals are that a single Transmission Losses Adjustment (TLA) should be developed. Under this approach, Ofgem is proposing a single GB transmission losses volume target.
- 5.14. NGT initially projected that the volume of GB transmission losses for 2005/06 will be 5.83TWh. NGC has subsequently revised this downwards to 5.79TWh based on a reduction in the anticipated level of wind generation connecting in Scotland during 2005/06. In line with NGT's revised projection, Ofgem proposes that the annual GB transmission losses target volume for 2005/06 should be set at 5.79TWh. Ofgem proposes that this will then be converted into a Settlement Period specific transmission losses target ( $TLT_j$ ) by dividing the annual target value by the total number of Settlement Periods in a year using the following formula:

$$TLT_j = \frac{TLT_t}{SP_t}$$

- 5.15. Where:

- ◆  $TLT_t$  is the annual transmission losses target; and
- ◆  $SP_t$  is the total number of Settlement Periods in the year.

### ***Transmission Losses Reference Price***

- 5.16. Consistent with having a single GB transmission losses volume target, Ofgem is proposing a single GB Transmission Losses Reference Price (TLRP). As in previous years, to ensure that the transmission losses element of NGC's SO incentive scheme is consistent with the balancing services element, Ofgem

proposes that TLRP should be set to reflect market prices on the basis of the prevailing forward curve for the timescale in question. On the basis of current prices for the annual period beginning on 1 April 2005, Ofgem proposes that TLRP should be set at £29/MWh.

### ***Transmission losses reporting***

- 5.17. It is important to note that as part of the statutory licence consultation<sup>60</sup> in relation to the transmission price controls under BETTA, Ofgem is proposing a transmission losses reporting scheme to provide for the collection of data in respect of the volume of transmission losses on the GB transmission system.

### ***Incentive scheme parameters***

- 5.18. Ofgem continues to consider that the incentive scheme parameter options presented in the Initial Proposals document provide differing but appropriate balances of risk and reward for NGC. Ofgem considers that these options provide an appropriate balance between the need to continue to build on the effective incentive schemes under which NGC has operated in its SO role in E&W to date and the need to reflect any uncertainty associated with the extension of its role to apply GB-wide. Therefore, Ofgem is not proposing any revisions to the menu of options presented in the Initial Proposals.
- 5.19. In the Initial Proposals document Ofgem indicated that it would be for NGC to select from the suite of options the one which it considered offers the most appropriate balance of risk and reward. Following the publication of the Initial Proposals, NGC has indicated Option 2 as its preference. Therefore, Ofgem's Final Proposal is that the incentive scheme parameters should be set on the basis of Option 2. On the basis of the Option 2 parameters, Ofgem's Final Proposals for the incentive scheme parameters with gross treatment of transmission losses are outlined in Table 5.3.

---

<sup>60</sup> 'Transmission price controls and BETTA statutory licence consultation, impact assessment, and consultation on the statements of the basis of transmission owner charges', Ofgem, February 2005.

**Table 5.3 – Ofgem’s Final Proposals for 2005/06 SO incentive scheme with gross treatment of transmission losses (money of the day)**

<b>Proposed value</b>	<b>2005/06 Final Proposals</b>
<b>Target</b>	£500 million
<b>Upside sharing factor</b>	40%
<b>Downside sharing factor</b>	20%
<b>Cap</b>	£40 million
<b>Floor</b>	-£20 million

5.20. Table 5.4 shows the actual Final Proposals for the incentive scheme parameters, set on the basis of Option 2, revised to reflect the net treatment of transmission losses under the 2005/06 SO incentive scheme.

**Table 5.4 – Ofgem’s Final Proposals for 2005/06 SO incentive scheme with net treatment of transmission losses (money of the day)**

<b>Proposed value</b>	<b>2005/06 Final Proposals</b>
<b>Target</b>	£377.5 million
<b>Upside sharing factor</b>	40%
<b>Downside sharing factor</b>	20%
<b>Cap</b>	£40 million
<b>Floor</b>	-£20 million

5.21. Ofgem considers that the Final Proposals for the 2005/06 SO incentive scheme provide NGC with an appropriate balance of risk and reward which is in the interests of customers, who ultimately pay for the costs of system operation.

***Specific allowances included in the target***

5.22. The target value specified in Table 5.5 includes specific allowances for the following areas:

- ◆ CUSC Amendment Proposal CAP047: “Introduction of a competitive process for the provision of Mandatory Frequency Response”;

- ◆ within Scotland constraints; and
- ◆ Cheviot constraints.

**Table 5.5 – Specific allowances within the 2005/06 SO incentive scheme target (money of the day)**

<b>Area</b>	<b>Allowance within target</b>
<b>CAP047 costs</b>	£7.35 million
<b>Within Scotland constraints</b>	£10 million
<b>Cheviot constraints</b>	£20 million

5.23. As provided for in the transmission licence, the IAE provisions are available in the event that there are material deviations, net of any countervailing factors, above or below Ofgem’s baseline allowances outlined above. This is consistent with the general approach whereby the IAE provisions can be invoked to seek to take account of costs incurred or savings made as a result of an event for which no allowance was made when the SO incentive scheme parameters were set.

5.24. While the IAE provisions would be available, it is important to note that any IAE claim would be carefully assessed on its merits and consulted upon with market participants. The assessment would include consideration of the outturn costs versus the assumptions made and whether or not NGC acted efficiently and economically in accordance with its licence obligations when incurring these costs. Therefore, it is not the case that an IAE will automatically be made in the event that there are material deviations away from the baseline allowances.

5.25. Ofgem considers that it is important for market participants to be aware of the costs associated with these particular areas. In relation to CUSC Amendment Proposal CAP047, Ofgem notes that NGC will be required to publish market data describing prices and volumes of frequency response services procured in previous months as well as data on submitted prices for each service by Balancing Mechanism Unit. Ofgem considers that this information will be of use to market participants. However, Ofgem requests that NGC uses mechanisms such as the Monthly Balancing Services Report and/or the Operational Forum to provide appropriate, non-commercially sensitive information to market participants in relation to CAP047 costs. In relation to

constraints, Ofgem requests that NGC provides appropriate, non-commercially sensitive information to market participants in a similar manner. Ofgem considers that such information should relate to both constraint costs in aggregate across GB and constraint costs in the specific regional areas defined in NGT's forecasts.

### ***Sharing factors, cap and floor***

- 5.26. In principle, Ofgem continues to consider that there should be symmetry between the sharing factors and between the cap and floor values, as this represents an appropriate balance between the interests of customers and NGC. However, in light of potential uncertainty concerning GB balancing costs in the initial period post-BETTA go-live, two of the SO incentive scheme options presented in the Initial Proposals deviated from this approach. However, Ofgem continues to consider that the SO incentive scheme parameter combinations presented in the Initial Proposals are appropriate. As such, Ofgem considers that it is appropriate for there to be asymmetry between the upside reward and downside exposure under the incentive scheme option selected by NGC. Therefore, Ofgem considers that the cap and floor values and the sharing factors included in the Final Proposals are appropriate when combined with the Final Proposals target.
- 5.27. In order to ensure consistency between NGC's internal and external SO incentive schemes, Ofgem's Final Proposals involve setting consistent sharing factors for both schemes. Ofgem considers that setting the same sharing factors for the internal and external SO incentives ensures that NGC's interests are aligned with those of customers by giving NGC incentives to reduce the total costs of system operation rather than arbitraging its position between the different incentive schemes. Therefore, Ofgem's Final Proposals are that the internal SO incentive scheme upside sharing factor will be set at 40 per cent and the internal SO incentive scheme downside sharing factor will be set at 20 per cent to ensure alignment between the internal and external SO incentive schemes.

## ***Timing of BETTA go-live***

### ***Profiling the incentive scheme target***

- 5.28. As outlined in the Initial Proposals, in the event that BETTA go-live is delayed, Ofgem considers that an approach which involves rolling over the existing E&W scheme until the actual BETTA go-live date to be the most appropriate. Such an approach would require profiling of:
- ◆ the annual target, cap and floor values parameters in the rolled over E&W SO incentive scheme to derive an appropriate value for the period over which it applies ahead of actual BETTA go-live; and
  - ◆ the annual target, cap and floor values parameters in the GB SO incentive scheme to derive an appropriate value for the period over which it applies after actual BETTA go-live.
- 5.29. Ofgem presented two profiling methodologies which could be employed under this approach. One approach was simplistic and profiled on the basis of the number of days between the scheduled and actual BETTA go-live dates. The second approach was slightly more complex which factored in the extent to which IBC exhibit seasonality. With the exception of NGC, there was no clear preference as to which option was the most appropriate. NGC expressed a preference for the second slightly more complex methodology.
- 5.30. In the absence of any clear consensus amongst respondents in relation to the options presented and in light of the points raised by NGT, Ofgem is proposing to proceed on the basis of the slightly more complex profiling methodology.
- 5.31. On the basis of historical evidence which suggests that approximately 45 per cent of IBC is incurred in the summer period (1 April to 30 September inclusive) and approximately 55 per cent of IBC is incurred in the winter period (1 October to following 31 March inclusive), Ofgem proposes that a BETTA profiling factor (BPF) is developed as follows:

$$BPF = \frac{(NDS * PFS) + (NDW * PFW)}{365}$$

5.32. Where:

- ◆ NDS is given by the number of days in the summer period from and including 1 April 2005 to the BETTA go-live date;
- ◆ PFS is the summer period profiling factor which is set at 0.9<sup>61</sup>;
- ◆ NDW is given by the number of days in the winter period from and including 1 October 2005 to the BETTA go-live date; and
- ◆ PFW is the winter period profiling factor which is set at 1.1<sup>62</sup>.

5.33. Ofgem considers that this profiling approach offers a pragmatic way of providing contingency in the event that BETTA go-live is delayed in this respect.

5.34. The proposal to rollover the existing E&W SO incentive scheme from 1 April 2005 until BETTA go-live in the event that BETTA go-live is delayed needs to take account of the proposed move to net treatment of transmission losses under the 2005/06 SO incentive arrangements. As highlighted earlier, the existing E&W SO incentive scheme target of £415 million includes an allowance of £95.1 million ( $4.53\text{TWh} * £21.00/\text{MWh}$ ) associated with the gross treatment of transmission losses. It would be inappropriate for this element of the £415 million target to be rolled over in the context of net treatment of transmission losses. Therefore, the target which would be rolled over in the event of a BETTA go-live delay is £319.9 million. This is the existing E&W 2004/05 target revised to remove the transmission losses allowance (£415 million minus £95.1 million).

### ***Transmission losses target***

5.35. Under the net transmission losses scheme being proposed for 2005/06, an annual transmission losses target volume must be defined. As discussed above, the annual GB transmission losses target for 2005/06 is to be set at 5.79TWh. The transmission losses allowance within the existing 2004/05 E&W SO incentive scheme was developed on the basis of an assumed annual volume of

---

<sup>61</sup> 0.9 is derived as follows:  $((0.45 * 365) / 183)$ , where 0.45 is the proportion of IBC incurred in the summer period, 365 is the number of days in the year and 183 is the number of days in the summer period.

<sup>62</sup> 1.1 is derived as follows:  $((0.55 * 365) / 182)$ , where 0.55 is the proportion of IBC incurred in the winter period, 365 is the number of days in the year and 182 is the number of days in the winter period.



transmission losses of 4.53TWh. In order to provide contingency in relation to the transmission losses target, Ofgem considers that the following approach is appropriate:

- ◆ in the event that the BETTA go-live date is later than 1 April 2005, for the period from and including 1 April 2005 up to the BETTA go-live date only, the annual transmission losses target should be set at 4.53TWh;
- ◆ in the event that the BETTA go-live date is later than 1 April 2005, for the period from and including the BETTA go-live date up to and including 31 March 2006 only, the annual transmission losses target should be set at 5.79TWh; and
- ◆ in the event that the BETTA go-live date is 1 April 2005, for the period from and including 1 April 2005 up to and including 31 March 2006, the annual transmission losses target should be set at 5.79TWh.

5.36. Ofgem considers that this approach offers a pragmatic way of providing contingency in the event that BETTA go-live is delayed in this respect.

## ***BSC Modification Proposals and CUSC Amendment Proposals***

5.37. Ofgem continues to consider that the IAE provisions (which have recently been revised to enhance the transparency of the IAE process and the overall effectiveness of the IAE provisions<sup>63</sup>) should not be available for specified BSC Modification Proposals and CUSC Amendment Proposals which have been considered during the development of the incentive arrangements. This is because consideration for any associated costs has been included in the incentive target. The inclusion of this allowance in the target, in advance of a final decision on the proposals being reached, in no way prejudices any decision or otherwise fetters the discretion of the Authority in respect of the Modification Proposals/Amendment Proposals.

---

<sup>63</sup> See the explanatory note which accompanied the licence revision at: [http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/9971\\_1405.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/9971_1405.pdf).

- 5.38. Therefore, the target IBC value will take account of those outstanding BSC Modification Proposals and CUSC Amendment Proposals that are likely to have an impact on the SO incentive arrangements and for these proposals and amendments the IAE provisions will not be available. Where appropriate, subsequent modifications will be dealt with via IAE provisions. The list of BSC Modification Proposals and CUSC Amendment Proposals that Ofgem considers should be exempt from IAE provisions is provided in Appendix 5.
- 5.39. However, Ofgem does not propose that this approach should be adopted for the following BSC Modification Proposals/CUSC Amendment Proposals:
- ◆ **CUSC Amendment Proposal CAP047<sup>64</sup>**. As outlined above, Ofgem has included within its proposed target an allowance of £7.35 million for CUSC Amendment Proposal CAP047. The IAE provisions would be available in the event that there are material deviations between the specified allowance and outturn incremental costs net of any countervailing factors. While the IAE provisions would be available, NGC is obliged, in accordance with its transmission licence, to contract efficiently and economically for all balancing services, including frequency response.

It is important to note that this CAP047 allowance of £7.35 million is only provided for in the proposed target for GB SO incentive scheme for 2005/06. In the unlikely event that BETTA go-live is delayed, the existing England and Wales scheme will, as discussed above, be rolled over from 1 April 2005 until the actual BETTA go-live date. During this interim period there would be no CAP047 allowance included in the rolled over SO incentive scheme. As CAP047 is due to be implemented on 1 October 2005, the absence of any allowance in the rolled over scheme is not an issue if BETTA go-live occurs at any point between 1 April 2005 and 30 September 2005. The absence of a CAP047 allowance in the rolled over scheme only becomes an issue if BETTA go-live occurs after 1 October 2005. If this unlikely scenario materialises,

---

<sup>64</sup> CUSC Amendment Proposal CAP047: "Introduction of a competitive process for the provision of Mandatory Frequency Response".

Ofgem expects that the IAE provisions would be available for any material costs/savings, net of any countervailing factors, associated with CAP047 which are incurred under the rolled over scheme prior to BETTA go-live.

- ◆ **BSC Modification Proposal P173 Alternative<sup>65</sup>**. Modification Proposal P173 proposes the creation of arrangements under which market participants responding to Emergency Instructions would be paid (or pay) for the resultant acceptance at a replacement price based on the definition of Avoidable Costs included within Section G of the BSC. Therefore, payments to or from NGC for such acceptances would be made on the basis of a price determined by Avoidable Costs.

Alternative Modification Proposal P173 widens the definition of Avoidable Costs for this purpose to additionally include, where demonstrably incurred, costs associated with damage to property, death or injury to persons, increases in insurance premia, increases in financing costs and increases in overhead costs. Given the uncertainty concerning the potential extent of these additional cost categories, Ofgem does not consider that an allowance for these costs can be reasonably made within the SO incentive scheme target. Therefore, Ofgem considers that the IAE provisions would be available for this additional cost category associated with Alternative Modification Proposal P173.

For the avoidance of doubt, the IAE provisions will not be available for any costs which are determined in accordance with the existing definition of Avoidable Costs, consistent with the treatment of any costs associated with original Modification Proposal P173.

- ◆ **BSC Modification Proposal P175<sup>66</sup>**. Modification Proposal P175 proposes the creation of a compensation claims route under which market participants responding to specified Grid Code instructions would be able to claim for compensation for any associated costs incurred.

---

<sup>65</sup> BSC Modification Proposal P173: "Revised Settlement Arrangements for Emergency Instructions".

<sup>66</sup> BSC Modification Proposal P175: "Development of Provisions Related to Certain Bid-Offer Acceptances Issued Pursuant to the Grid Code (e.g. BC2.9 and BC2.10)".

Costs associated with any resultant plant damage could be included within any compensation claim. Given the uncertainty concerning the potential extent of costs associated with plant damage, Ofgem does not consider that an allowance for these costs can be reasonably made within the SO incentive scheme target. Therefore, Ofgem considers that the IAE provisions would be available for such costs associated with Modification Proposal P175.

- ◆ **CUSC Amendment Proposal CAP076 Alternatives<sup>67</sup>**. Amendment Proposal CAP076 proposes a revised framework for System to Generator Intertripping Schemes. The proposal aims to clarify the obligations between NGC and associated Generators in the area of arming and operating intertripping schemes. In addition, the proposal aims to establish an administered pricing mechanism within the CUSC for certain categories of intertrips. The Amendment Proposal CAP076 Alternatives propose the creation of a compensation claims process under which a generator may make a claim for any plant damage incurred directly as a result of an intertrip and/or seek to introduce intertrip arming fees. Given the uncertainty concerning the potential extent of these costs at this stage, Ofgem does not consider that an allowance for these costs can be reasonably made within the SO incentive scheme target. Therefore, Ofgem considers that the IAE provisions would be available for such costs associated with Amendment Proposal CAP076 Alternatives.

## ***Summary***

- 5.40. This chapter has outlined Ofgem's Final Proposals in respect of the SO incentive scheme to apply from 1 April 2005. Ofgem considers that the proposed incentive scheme provides NGC with an appropriate balance of risk and reward, which is in the interests of consumers who ultimately pay for the costs of system operation. Ofgem's Final Proposals in terms of the incentive scheme parameters are summarised in Table 5.6.

---

<sup>67</sup> CUSC Amendment Proposal CAP076: "Treatment of System to Generator Intertripping Schemes".

**Table 5.6 – Ofgem’s Final Proposals for 2005/06 SO incentive scheme (money of the day)**

<b>Proposed value</b>	<b>2005/06 Final Proposals</b>
<b>Target</b>	£377.5 million
<b>Upside sharing factor</b>	40%
<b>Downside sharing factor</b>	20%
<b>Cap</b>	£40 million
<b>Floor</b>	-£20 million

5.41. Other key elements of Ofgem’s final proposals are:

- ◆ a TLRP value of £29.00/MWh; and
- ◆ a TLT value of 5.79TWh.

## 6. Licence modification

- 6.1. Implementation of the Final Proposals for the SO incentive arrangements to apply to NGC from 1 April 2005 requires modification of NGC's electricity transmission licence. In order to amend NGC's transmission licence to take account of the proposed changes to the SO incentive scheme associated with the proposals, a statutory notice of licence modification under section 11 of the Electricity Act 1989 is required. This document incorporates this notice in order to amend NGC's electricity transmission licence, with the agreement of the licensee, to take account of the proposed changes to the SO incentive scheme for the period 1 April 2005 to 31 March 2006. The statutory notice is contained within Appendix 1. The Schedule to this notice contains a marked-up version of the proposed licence modifications in respect of NGC's transmission licence.
- 6.2. The statutory notice under section 11 of the Electricity Act 1989 specifies a period of not less than 28 days during which interested parties can make representations or objections to the proposed licence modification, following which revisions to the proposed licence modification will be made if it is considered appropriate, except where the Secretary of State directs Ofgem not to make the modifications. Ofgem invites any representations on or objections to the proposed licence modification. Responses should be submitted in writing by 29 March 2005 addressed to:

Steve Smith

Office of Gas and Electricity Markets

9 Millbank

London

SW1P 3GE

- 6.3. Electronic responses may be sent to: [Wholesale.Markets@ofgem.gov.uk](mailto:Wholesale.Markets@ofgem.gov.uk)
- 6.4. 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. Consultees should try to put any

confidential material in appendices to their responses. Ofgem prefers to receive responses in electronic form so they can be placed easily on the Ofgem website.

- 6.5. Following consideration of any representations received, revisions to the proposed licence modifications will be made if it is considered appropriate. In order for the proposed licence modifications to be made, NGC is required to provide its written consent to the modifications. If this is received, Ofgem will direct the modification of NGC's transmission licence in line with the proposed licence modifications. If NGC does not consent to the proposed licence modifications, Ofgem has the ability to refer the proposed SO incentive scheme modifications to the Competition Commission for final adjudication. If this was to occur, there would be a lapse in NGC's SO incentive arrangements from the expiry of the current SO incentive scheme pending the final adjudication of the Competition Commission.

# Appendix 1 Statutory modification notice

- 1.1 This appendix sets out the statutory notice published under section 11 of the Electricity Act 1989 to make modifications to the electricity transmission licence of NGC in order to implement the proposals for NGC's SO incentive arrangements to apply from 1 April 2005. The proposed modifications are highlighted in Schedule 1 of the notice.



# NOTICE UNDER SECTION 11(2) OF THE ELECTRICITY ACT 1989

The Gas and Electricity Markets Authority (“the Authority”) hereby gives notice pursuant to section 11(2) of the Electricity Act 1989 (“the Act”) as follows:

1. The Authority proposes to modify the conditions of the transmission licence treated as granted to National Grid Company plc (“NGC”) under section 6(1)(b) of the Act by **amending the following in accordance with Schedule 1 to this Notice:**
  - a. **paragraphs 5 – 12 inclusive of Special Condition AA5A (Revised Restrictions on Revenue);**
  - b. **Special Condition AA5E (Duration of the Transmission Network Revenue Restriction and the Balancing Services Activity Revenue Restriction);**
  - c. **paragraphs B1 – B4 inclusive of Schedule A Part B (Terms used in the balancing services activity revenue restriction); and**
  - d. **the ISF<sub>i</sub> values in paragraph B5(e) of Schedule A Part B (Terms used in the balancing services activity revenue restriction).**

The proposed modifications are marked against the relevant sections of NGC’s transmission licence as at 26 January 2005.

2. For the avoidance of doubt, no amendments are being proposed to paragraphs 1 – 4B inclusive and 13 – 16 inclusive of Special Condition AA5A, to Schedule A Part A or to any part of Schedule A Part B not specifically referred to above. As such, nothing in these proposed modifications alters these sections.
3. Subject to the outcome of this statutory consultation, consideration of respondents’ views and the consent of NGC being given, it is the intention of the Authority that these proposed licence modifications shall have effect on and from 00:00 hours on 1 April 2005.

4. The reasons why the Authority proposes to make the licence modifications appearing in paragraph 1 and their effect, are set out in paragraph 5 and by the Authority in the following documents:
- a. “NGC System Operator incentive scheme from April 2005, Initial consultation document, Ofgem, September 2004”;
  - b. “NGC System Operator incentive scheme from April 2005, Initial Proposals, Ofgem, December 2004”; and
  - c. “NGC System Operator incentive scheme from April 2005, Final Proposals and statutory licence consultation, Ofgem, March 2005”.
5. In summary, the effects of the proposed licence modifications are as follows:

The proposed amendments seek to revise the relevant sections in order to accommodate the proposals relating to the NGC Great Britain (“GB”) System Operator (“SO”) incentive scheme from 1 April 2005.

The incentive scheme parameters of the NGC GB SO incentive scheme intended to run from 1 April 2005 until 31 March 2006 are set out in the table below:

<b>Parameter</b>	<b>2005/06 values (money of the day)</b>
Incentive scheme target	£377.5 million
Upside sharing factor	40%
Downside sharing factor	20%
Cap	£40 million
Floor	-£20 million

The transmission losses element of the SO incentive scheme is to be included on a net basis rather than a gross basis in line with the proposals. As part of this, an annual transmission losses target (“TLT<sub>t</sub>”) is to be defined in line with the proposals. TLT<sub>t</sub> is to be set at 5,790,000MWh. Additionally, the transmission losses reference price (“TLRP<sub>j</sub>”) is to be redefined in line with the proposals. TLRP<sub>j</sub> is to be set at £29.00/MWh.

The derivation of the net imbalance reference price is to be redefined in line with the proposals following the merger of the providers of the market indices upon which this reference price was based.

The proposals also expose NGC to a potential increase in system operation costs associated with Balancing and Settlement Code ("BSC") Modification Proposals or Connection and Use of System ("CUSC") Amendment Proposals, as of 14 February 2005, being consulted on by the BSC or CUSC Panels and which may be implemented in the future following a decision by the Authority. The inclusion of this allowance is made without prejudice to the Authority's decision in respect of these modifications. The utilisation of the allowance will be taken into account at the next periodic review of NGC's SO incentives (2006/07).

In addition, the proposed amendments seek to modify the downside sharing factor relating to the incentive payments on internal costs in respect of the relevant period commencing on 1 April 2005. The proposed licence amendments aim to set the internal costs incentive scheme sharing factors for these years equal to the proposed external costs incentive scheme sharing factors for the relevant period commencing on 1 April 2005.

6. The existing incentive scheme set out in Part 2(i) of special condition AA5A and Schedule A Part B will terminate with effect from 31 March 2005 on NGC giving its consent to the proposed modifications and issuing a relevant disapplication request in relation to the existing scheme under the terms of special condition AA5E.
7. Respondents should note that on 22 February 2005 Ofgem issued a separate section 11 notice under the Act relating to proposed modifications to NGC's transmission licence, pursuant to transmission prices controls to apply under the British electricity trading and transmission arrangements ("BETTA") (the "Second Notice").

This notice and the Second Notice both propose revisions to paragraph B5(e) of Schedule A Part B (Terms used in the balancing services activity revenue restriction). Each notice, however, proposes revisions to different parts of

paragraph B5(e) of Schedule A Part B of the transmission licence. As such the proposed revisions are not inconsistent with each other.

Ofgem intends to make the modifications proposed pursuant to the Second Notice to have effect on and from 00:00 hours on the BETTA go-live date, being the date which the Secretary of State indicates in a direction shall be the BETTA go-live date.

The modifications proposed in the Second Notice and the modifications proposed in this notice are capable of being made without the other.

8. A copy of the proposed licence modifications and other documents referred to in this notice are available (free of charge) from the Ofgem library (telephone 020 7901 1600) or on the Ofgem website ([www.ofgem.gov.uk](http://www.ofgem.gov.uk)).
9. Any representations or objections to the proposed licence modifications may be made in writing before 29 March 2005 to:

Steve Smith  
Office of Gas and Electricity Markets  
9 Millbank  
London  
SW1P 3GE

or by email to [wholesale.markets@ofgem.gov.uk](mailto:wholesale.markets@ofgem.gov.uk)



**Steve Smith**

**Duly authorised on behalf of the Authority**

**1 March 2005**

# SCHEDULE 1

## Special Condition AA5A: Revised Restrictions on Revenue

### Part 1

**No amendments are proposed to paragraphs 1 – 4B inclusive of this Special Condition.**

Nothing in this text alters the operation of Part 1 of this Special Condition (paragraphs 1-4B inclusive).

### Part 2 (i): Balancing services activity revenue restriction on external costs

5. The licensee shall use its best endeavours to ensure that in the relevant period  $t$  the revenue derived from and associated with procuring and using balancing services (being the external costs of the balancing services activity) shall not exceed an amount calculated in accordance with the following formula:

$$BXext_t = CSOBM_t + BSCC_t + ET_t - OM_t + IncPayExt_t$$

where:

$BXext_t$  which represents the maximum allowed revenue derived in relevant period  $t$  from and associated with procuring and using balancing services, is the aggregate of the following components:

CSOBM <sub>t</sub>	which represents the cost to the licensee of bids and offers in the balancing mechanism accepted by the licensee in relevant period t less the total non-delivery charge for that period, is the sum across relevant period t of the values of CSOBM <sub>i</sub> (being the daily system operator BM cashflow as defined in Table X-2 of Section X of the BSC in force immediately prior to 1 April 2001);
BSCC <sub>t</sub>	means the costs to the licensee of contracts for the availability or use of balancing services during the relevant period t, excluding costs within CSOBM <sub>t</sub> but including charges made by the licensee for the provision of balancing services to itself in the relevant period t;
ET <sub>t</sub>	means the amount of any adjustment to be made during the relevant period t in respect of a previous relevant year as provided in paragraph 6;
OM <sub>t</sub>	means an amount representing the revenue from the provision of balancing services to others during relevant period t, calculated in accordance with paragraph 7;
IncPayExt <sub>t</sub>	means an incentive payment for relevant period t calculated in accordance with paragraph 8.

5A. For the purposes of Part 2 (i) paragraphs 7(b) and 9 of this special condition, where the BETTA go-live date is a date later than 1 April 2005, the term “GB transmission system” shall, for the period from and including 1 April 2005 up to the BETTA go-live date only, be replaced with the term “licensee’s transmission system”.

6. Balancing services activity adjustments

For the purposes of paragraph 5, the term  $ET_t$  which relates to prior year adjustments in respect of the relevant period  $t$  shall mean:

- (a) the costs, whether positive or negative, to the licensee of
- bids and offers in the balancing mechanism accepted by the licensee in any relevant year before relevant period  $t$  less the total non-delivery charge for the period; and
  - contracts for the availability or use of balancing services during any relevant year before relevant period  $t$ , excluding costs within  $CSOBM_t$  for any relevant year, but including charges made by the licensee for the provision of balancing services to itself in any relevant year before relevant period  $t$

in each case after deducting such costs to the extent that they have been taken into account in any relevant year in computing the terms  $CSOBM_t$  or  $BSCC_t$ ; and

- (b) any amount within the term  $ET_t$  as defined in this licence in the form it was in on 1 April 2000 whether as then defined or as now defined.

7. Provision of balancing services to others

For the purpose of paragraph 5,  $OM_t$  (the amount representing the revenue from the provision of balancing services to others) shall be the sum of:

- (a) the total amount (exclusive of interest and value added tax attributable thereto) recovered by the licensee in respect of the relevant period  $t$  under any agreements entered into between an electricity supplier (being the holder of a supply licence granted or treated as granted under Section 6(1)(d) of the Act) or network operator (as defined in the grid code) and the licensee pursuant to which the costs of operation or non-operation of generation sets which are required to support the stability of a user system (as defined in the grid code) are charged to such electricity supplier (as defined above) or network operator (as defined in the grid code); and
- (b) the total costs (exclusive of interest and value added tax attributable thereto) incurred by the licensee in respect of the relevant period  $t$  which arise by reason of the operation or non-operation of generation sets and which result directly or indirectly from works associated with the GB transmission system or works thereon being carried out, rescheduled or cancelled by reason of any agreement with, or request of, any third party other than an electricity supplier (as defined in paragraph 7 (a) of this special condition) or network operator (as defined in the grid code).

8. Determination of incentive payments on external costs



For the purposes of paragraph 5, the term  $IncPayExt_t$  shall be derived from the following formula:

$$IncPayExt_t = [SF_t(MT_t - IBC_t) + CB_t]$$

where:

$SF_t$  which is a balancing services activity sharing factor in respect of relevant period  $t$ , has the value specified either against the value of  $IBC_t$  for the relevant period  $t$  in the column headed  $SF_t$  in the table in paragraph B1 (a) of Part B of Schedule A or in paragraph B1 (b) of Part B of Schedule A.

$MT_t$  which is a target for balancing services activity incentivised external costs in respect of relevant period  $t$ , has the value specified either against the value  $IBC_t$  for relevant period  $t$  in the column headed  $MT_t$  in the table in paragraph B1 (a) of Part B of Schedule A or in paragraph B1 (b) of Part B of Schedule A.

$IBC_t$  which is the cost of balancing services on which the licensee is incentivised during the relevant period  $t$ , is calculated in accordance with the formula given in paragraph 9.

$CB_t$  which is a balancing services sharing factor offset in respect of the relevant period  $t$ , has the value either specified against the value of  $IBC_t$  for the relevant period  $t$  in the column headed  $CB_t$

in the table in paragraph B1 (a) of Part B of Schedule A or in paragraph B1 (b) of that Part.

9. For the purposes of paragraph 8, the term  $IBC_t$  in respect of relevant period  $t$  shall be calculated in accordance with the following formula:

$$IBC_t = CSOBM_t + BSCC_t + \sum_{jt} \left( (TL_j - TLT_j) * [TLRP_j] \right) + \sum_{jt} (TQEI_j * [NIRP_j]) - RT_t - OM_t$$

where:

$j$  in all cases shall mean a settlement period (being a half an hour) as defined in the BSC.

$\sum_{jt} \left( (TL_j - TLT_j) * [TLRP_j] \right)$  is the volume of transmission losses ( $TL_j$ ) minus the target volume of transmission losses ( $TLT_j$ ) multiplied by the transmission losses reference price ( $TLRP_j$ ) for each settlement period, summed across all settlement periods in the relevant period  $t$ .

$\sum_{jt} (TQEI_j * [NIRP_j])$  the total net imbalance volume ( $TQEI_j$ ) as defined in the BSC in force immediately prior to 1 April 2001 multiplied by the net imbalance volume reference price ( $NIRP_j$ ) for each settlement period, summed across all settlement periods in the relevant period  $t$ .

$TL_j$  which is the volume of transmission losses, is given by the sum of BM unit metered volumes (as from time to time defined in the BSC) during the settlement period  $j$  for all BM units (as from time to time defined in the BSC), being the difference between the quantities of electricity delivered to the GB transmission system and the quantity taken from

the GB transmission system during that settlement period.

$TLT_j$  which is the target volume of transmission losses, has the value specified for each settlement period set out in paragraph B3 of Part B of Schedule A.

$TLRP_j$  which is the transmission losses reference price, has the value specified for each settlement period set out in paragraph B3 of Part B of Schedule A.

$NIRP_j$  which is the net imbalance volume reference price for each settlement period  $j$ , has the values set out in paragraph B4 in Part B Schedule A.

$RT_t$  means the amount of any allowed income adjustments given by paragraph 12 (b) in respect of relevant period  $t$ .

10. Income adjusting events under the balancing services activity revenue restriction on external costs

- (a) An income adjusting event may arise from any of the following:
- (i) an event or circumstance constituting force majeure under the BSC;
  - (ii) an event or circumstance constituting force majeure under the CUSC;
  - (iii) a security period as defined in special condition AA5D; and

- (iv) an event or circumstance other than listed above which is, in the opinion of the Authority, an income adjusting event and is approved by it as such in accordance with paragraph 12(a) of this special licence condition,

where the event or circumstance has, for relevant year  $t$ , increased or decreased the value of  $IBC_t$  by more than £2,000,000 (the “threshold amount”). This threshold amount does not apply in respect of subparagraph 10(a)(iii) above.

- (b) For the purpose of relevant year  $t$  commencing on 1 April 2004 and ending on 31 March 2005, events or circumstances arising directly from the implementation or otherwise of the following proposed modifications and amendments (both the original and any alternative unless otherwise specified) listed in tables 1 and 2 below shall not qualify as an income adjusting event for the purpose of paragraph 10(a) above:

**Table 1: Proposed modifications to the BSC**

<b>BSC Modification Proposal</b>	<b>BSC Modification Title (as entitled by the proposer of the modification)</b>
P157	Replacement of current Supplier Charges rules
P171	Retrospective removal of Emergency Instructions taken for System reasons from Imbalance Price
P172	Removal of Emergency Instructions taken for System reasons from Imbalance Price
P173 (original only)	Revised Settlement Arrangements for Emergency Instructions
P174	Provision of Users of an Interconnector with a single Boundary Point connection to form a Trading Unit amongst themselves and with other BM Units at the same site
P176	Clarification of the Requirements for Estimation/Deeming of Meter Readings/Advances in Certain Circumstances to Facilitate Correction of Anomalies in Settlement Calculations
P177	Removal of Intertrip provisions from the BSC
P178	Reduction in the BSC withdrawal timescale for parties who have settled the vast majority of their trading debts
P179	Housekeeping Modification
P180	Reduction to BSC Modification implementation dates, where an Authority decision is referred to Appeal or Judicial Review

<b>BSC Modification Proposal</b>	<b>BSC Modification Title (as entitled by the proposer of the modification)</b>
P182	Review and redefinition of the Non Half Hourly Settlement performance measures
P183	Additional Mechanisms for Obtaining a valid Change of Supplier Read
P184	Clarification of BSC Section W in relation to the application of the Query Deadline to Trading Queries/Disputes
P185	Redrafting of BSC Sections U and W in relation to clauses pertaining to the processing and rectification of Trading Queries/Disputes
P186	Rationalising the criteria for the submission and redeclaration of Demand & Generation Capacities

**Table 2: Proposed amendments to the CUSC**

<b>CUSC Amendment Proposal</b>	<b>CUSC Amendment Title (as entitled by the proposer of the amendment)</b>
CAP075	Arrangements for Replacing Resigning Panel Members and Alternates
CAP076 (original only)	Treatment of System to Generator Intertripping Schemes
CAP077	Revision to CUSC Amendment Implementation Dates for Appeal or Judicial Review

11. Notice of proposed income adjusting event

- (a) Where the licensee considers, and can provide supporting evidence that, in respect of relevant year t, there have been costs and/or expenses that have been incurred or saved by an income adjusting event, then the licensee shall give notice of this event to the Authority.
  
- (b) Where any other Party (as defined in the BSC) considers, and can provide supporting evidence that, in respect of relevant year t, there have been costs and/or expenses that have been incurred or saved by an income adjusting event, then that Party may give notice of this event to the Authority.

- (c) A notice provided to the Authority under paragraphs 11(a) and 11(b) shall, in the case of the licensee, and should, in so far as is practicable in the case of any other Party, give particulars of:
- (i) the event to which the notice relates and the reason(s) why the person giving the notice considers this event to be an income adjusting event;
  - (ii) the amount of any change in costs and/or expenses that can be demonstrated by the person giving the notice to have been caused or saved by the event and how the amount of these costs and/or expenses has been calculated;
  - (iii) the amount of any allowed income adjustment proposed as a consequence of that event and how this allowed income adjustment has been calculated; and
  - (iv) any other analysis or information which the person submitting the notice considers to be sufficient to enable the Authority and the relevant parties to fully assess the event to which the notice relates.
- (d) If the Authority considers that the analysis or information provided in sub-paragraphs 11(c)(i) to 11(c)(iv) above is insufficient to enable both the Authority and the relevant parties to assess whether an income adjusting event has occurred and/or the amount of any allowed income adjustment that should be approved, the Authority can request that the supporting evidence be supplemented with additional information that it considers appropriate.

- (e) A notice of an income adjusting event shall be given as soon as is reasonably practicable after the occurrence of the income adjusting event, and, in any event, not later than three months after the end of the relevant year in which it occurs.
- (f) The Authority will make public, excluding any confidential information, any notice of an income adjusting event following its receipt.
- (g) Any notice submitted to the Authority under either paragraphs 11(a) or 11(b) above should clearly identify whether any of the information contained in the notice is of a confidential nature. The Authority shall make the final determination as to confidentiality having regard to:
  - (i) the need to exclude from disclosure, so far as is reasonably practicable, information whose disclosure the Authority considers would or might seriously prejudicially affect the interests of a person to which it relates; and
  - (ii) the extent to which the disclosure of the information mentioned in sub-paragraph 11(g)(i) is necessary for the purposes of enabling the relevant parties to fully assess the event to which the notice relates.

12. The Authority's determination

- (a) Following consultation with relevant parties, including the licensee, BSC Parties and CUSC parties, the Authority shall determine:
  - (i) whether any or all of the costs and/or expenses given in a notice pursuant to paragraphs 11(a) or 11(b) were caused or saved by an income adjusting event;

- (ii) whether the event or circumstance has increased or decreased the value of  $IBC_t$  by more than the threshold amount, save in the case of sub-paragraph 10(a)(iii) where the threshold amount shall not apply; and
  - (iii) if so, whether the amount of the proposed income adjustment ensures that the financial position and performance of the licensee are, insofar as is reasonably practicable, the same as if that income adjusting event had not taken place, and if not, what allowed income adjustment would secure that effect.
- (b) In relation to the relevant year  $t$ , the allowed income adjustment ( $RT_t$ ) shall be:
  - (i) the value determined by the Authority under paragraph 12(a) above; or
  - (ii) if the Authority has not made a determination under paragraph 12(a) above within three months of the date on which notice of an income adjusting event was provided to the Authority, the amount of the allowed income adjustment proposed as a consequence of the event in the notice given to the Authority under sub-paragraph 11(c)(iii); or
  - (iii) in all other cases zero, including situations where the Authority has not made a determination under paragraph 12(a) above within three months of the date on which notice of an income adjusting event was provided to the Authority and the Authority has, before the end of that three month period, informed the relevant parties that the Authority considers that the analysis or



information provided in accordance with paragraphs 11(c) and/or 11(d) is insufficient to enable the Authority and relevant parties to assess whether an income adjusting event has occurred and/or the amount of any allowed income adjustment.

- (c) The Authority's decision in relation to any notice given under paragraphs 11(a) or 11(b) shall be in writing, shall be copied to the licensee and shall be in the public domain.
  
- (d) The Authority may revoke an approval of an income adjusting event and allowed income adjustment with the consent of the licensee, following consultation with the licensee and relevant parties. Revocation of any income adjusting event and allowed income adjustment shall be in writing, shall be copied to the licensee and shall be in the public domain.

**Part 2 (ii): Balancing services activity revenue restriction on internal costs**

**No amendments are proposed to paragraphs 13 – 16 inclusive of this Special Condition.**

Nothing in this text alters the operation of Part 1 of this Special Condition (paragraphs 13-16 inclusive).

### **Special Condition AA5E: Duration of the Transmission Network Revenue Restriction and the Balancing Services Activity Revenue Restriction**

1. The balancing services activity revenue restriction and the transmission network revenue restriction shall apply so long as this licence continues in force but shall cease to have effect in such circumstances and at such times as are described in paragraphs 2 to 6 below.
  
2. The transmission network revenue restriction and the balancing services activity revenue restriction (or any of them) shall cease to have effect (in whole or in part, as the case may be) if the licensee delivers to the Authority a disapplication request made in accordance with paragraph 3 or notice is given to the Authority by the licensee in accordance with either paragraph 5 or paragraph 6.
  
3. A disapplication request shall
  - (i) be in writing addressed to the Authority,
  
  - (ii) specify whether it relates to the balancing services activity revenue restriction and/or to the transmission network revenue restriction (or to both or any of them or to any part or parts thereof) and
  
  - (iii) state the date (being not earlier than the date referred to in paragraph 4) from which the licensee wishes the Authority to agree that those conditions shall cease to have effect.
  
4. No disapplication following delivery of a disapplication request shall have effect until a date being the earlier of not less than 18 months after delivery of the disapplication request or the following date:

- (i) in the case of a disapplication request which relates to the transmission network revenue restriction, 31 March 2006;
- (ii) in the case of a disapplication request which relates to the balancing services activity revenue restriction set out in Part 2(i) of special condition AA5A, 31 March 2006; and
- (iii) in the case of a disapplication request which relates to the balancing services activity revenue restriction set out in Part 2(ii) special condition AA5A, 31 March 2006.

Provided that in the event of a disapplication request being served by the licensee in the absence of agreeing any or all of the transmission network revenue and the balancing services activity revenue restriction the following default position shall apply:-

- (A) for the transmission network revenue restriction, the maximum allowable revenue for the relevant year commencing 1 April 2006 shall be defined in accordance with the formula in Part 1 of special condition AA5A where  $X_g$  equals zero and  $GW_{ref}$ , Rate<sub>i</sub> and  $L_i$  shall have the same values as those given in paragraphs 3 and 4 of Part 1 of special condition AA5A for the relevant year commencing on 1 April 2005;
- (B) for the balancing services activity revenue restriction set out in Part 2(ii) of special condition AA5A, the values set out in Schedule A, Part B for the relevant year commencing on 1 April 2005 shall apply; and

- (C) for the balancing services activity revenue restriction set out in Part 2(i) of special condition AA5A, the values set out in Schedule A, Part B shall apply.
5. If the Authority has not made a reference to the Competition Commission under section 12 of the Act relating to the modification of the Conditions or the part of parts thereof specified in the disapplication request before the beginning of the period of 12 months which will end with the disapplication date, the licensee may deliver written notice to the Authority terminating the application of such Conditions (or any part or parts thereof) as are specified in the disapplication request with effect from the disapplication date or a later date.
6. If the Competition Commission makes a report on a reference made by the Authority relating to the modification of the Conditions (or any part or parts thereof) specified in the disapplication request and such report does not include a conclusion that the cessation of those Conditions, in whole or in part, operates or may be expected to operate against the public interest, the licensee may within 30 days after the publication of the report by the Authority in accordance with section 13 of the Act deliver to him written notice terminating the application of those conditions or any part or parts thereof with effect from the disapplication date or later.

## **SCHEDULE A: SUPPLEMENTARY PROVISIONS OF THE CHARGE RESTRICTION CONDITIONS**

### **PART A**

No changes are proposed to Part A of Schedule A.

Nothing in this text alters the operation of Part A of Schedule A to this Special Condition.

## PART B

### Terms used in the balancing services activity revenue restriction

B1. For the purpose of paragraph 8 of Part 2(i) of special condition AA5A, the terms  $MT_t$ ,  $SF_t$  and  $CB_t$  shall be selected against the appropriate value of  $IBC_t$  (which shall be determined in accordance with paragraph 9 of special condition AA5A):

(a) in respect of the relevant year  $t$  commencing on 1 April 2005

(i) where the BETTA go-live date is a date later than 1 April 2005, for the period from and including 1 April 2005 up to the BETTA go-live date or up to and including 31 March 2006, if this is earlier than the BETTA go-live date, only, from the following table:

$IBC_t$ (£)	$MT_t$ (£)	$SF_t$	$CB_t$ (£)
$< 219,900,000$ (BPF)	0	0	40,000,000 (BPF)
$219,900,000$ (BPF) $< = IBC_t <$ $319,900,000$ (BPF)	319,900,000 (BPF)	0.40	0
$319,900,000$ (BPF) $< = IBC_t <$ $419,900,000$ (BPF)	319,900,000 (BPF)	0.40	0
$> = 419,900,000$ (BPF)	0	0	-40,000,000 (BPF)

(ii) where the BETTA go-live date is a date later than 1 April 2005, for the period from and including the BETTA go-live date, if this is

earlier than or on 31 March 2006, up to and including 31 March 2006 only, from the following table:

$IBC_t$ (£)	$MT_t$ (£)	$SF_t$	$CB_t$ (£)
$< 277,500,000$ (1-BPF)	0	0	40,000,000 (1-BPF)
$277,500,000$ (1-BPF) $\leq IBC_t <$ $377,500,000$ (1-BPF)	377,500,000 (1-BPF)	0.40	0
$377,500,000$ (1-BPF) $\leq IBC_t <$ $477,500,000$ (1-BPF)	377,500,000 (1-BPF)	0.20	0
$\geq 477,500,000$ (1-BPF)	0	0	-20,000,000 (1-BPF)

(iii) where the BETTA go-live date is 1 April 2005, from the following table:

$IBC_t$ (£)	$MT_t$ (£)	$SF_t$	$CB_t$ (£)
$< 277,500,000$	0	0	40,000,000
$277,500,000$ $\leq IBC_t <$ $377,500,000$	377,500,000	0.40	0
$377,500,000$			



$IBC_t$ (£)	$MT_t$ (£)	$SF_t$	$CB_t$ (£)
$\leq IBC_t < 477,500,000$	377,500,000	0.20	0
$\geq 477,500,000$	0	0	-20,000,000

(b) in respect of the relevant year  $t$  commencing on 1 April 2006 and each relevant year thereafter, the terms  $MT_t$ ,  $SF_t$  and  $CB_t$  shall be set to zero.

B2. For the purpose of paragraph B1, the value of the term BPF (being the BETTA Profiling Factor) in respect of the relevant period  $t$  shall be given by the following formula:

$$BPF = \frac{(NDS * PFS) + (NDW * PFW)}{365}$$

where:

**NDS** which is the number of days (up to a maximum of 183) in the Summer Period from and including 1 April 2005 to the BETTA go-live date.

**Summer Period** means the period from and including 1 April 2005 up to and including 30 September 2005.

**PFS** which is the profiling factor in the Summer Period, shall have the value 0.9.

NDW which is the number of days (up to a maximum of 182) in the Winter Period from and including 1 October 2005 to the BETTA go-live date.

Winter Period means the period from and including 1 October 2005 up to and including 31 March 2006.

PFW which is the profiling factor in the Winter Period, shall have the value 1.1.

- B3. For the purpose of paragraph 9 of Part 2(i) of special condition AA5A, the term  $TLRP_j$  in respect of each settlement period during relevant period  $t$  shall have the value in £ per megawatt hour of 29.00.

For the purpose of paragraph 9 of Part 2(i) of special condition AA5A, the term  $TLT_j$  in respect of each settlement period during relevant period  $t$  shall be given by the following formula:

$$TLT_j = \frac{TLT_t}{SP_t}$$

where:

$TLT_t$  which is the target volume of transmission losses in relevant period  $t$ , shall have the value in megawatt hours of:

- (a) 4,530,000 where the BETTA go-live date is a date later than 1 April 2005, for the period from and including 1 April 2005 up to the BETTA go-live date or up to and including 31 March 2006, if this is earlier than the BETTA go-live date, only.
- (b) 5,790,000 where the BETTA go-live date is a date later than 1 April 2005, for the period from and including the BETTA go-live

date, if this is earlier than or on 31 March 2006, up to and including 31 March 2006 only.

(c) 5,790,000 where the BETTA go-live date is 1 April 2005, for the relevant period t.

$SP_t$  which is the total number of settlement periods in the relevant period t.

B4. For the purpose of paragraph 9 of Part 2(i) of special condition AA5A, the term  $NIRP_j$ , which is the net imbalance volume reference price for each settlement period j, during relevant period t, shall be derived as follows:

(a) (i) where  $UKPXHH_j$  and  $UKPX4H_j$  data are published in respect of the relevant settlement period j then:

$$SPNIRP_j = (0.5 * UKPXHH_j) + (0.5 * UKPX4H_j)$$

(ii) where  $UKPXHH_j$  data are published and  $UKPX4H_j$  data are not published in respect of the relevant settlement period j then:

$$SPNIRP_j = UKPXHH_j$$

(iii) where  $UKPXHH_j$  data are not published and  $UKPX4H_j$  data are published in respect of the relevant settlement period j then:

$$SPNIRP_j = UKPX4H_j$$

- (iv) where neither  $UKPXHH_j$  data nor  $UKPX4H_j$  data have been published in respect of the relevant settlement period  $j$  then:

$$SPNIRP_j = SPNIRP_{j-1}$$

where:

$SPNIRP_j$  means the single price net imbalance volume reference price for each settlement period  $j$ .

$j$  in all cases shall mean a settlement period (being a half an hour) as defined in the BSC.

$j-1$  the settlement period immediately preceding the relevant settlement period  $j$ .

$UKPXHH_j$  means the United Kingdom Power Exchange (UKPX) volume weighted reference price for each settlement period  $j$  based on the traded prices of half hourly spot contracts.

$UKPX4H_j$  means the UKPX weighted average price in respect of all four (4) hour block market contracts delivered within the EFA block applying to those settlement periods  $j$ . In order to derive the

UKPX4H<sub>j</sub> price in respect of each relevant settlement period j  
the EFA block containing the relevant settlement period j shall  
be used.

EFA block means the six four hourly blocks within the EFA day (being 23.00 hours to 23.00 hours in the immediately following day) set out in the table below:

Block	Time
1	23:00 to 03:00
2	03:00 to 07:00
3	07:00 to 11:00
4	11:00 to 15:00
5	15:00 to 19:00
6	19:00 to 23:00

(b) The term  $NIRP_j$  shall be derived as follows:

(i) where  $TQEI_j < 0$

$$NIRP_j = SPNIRP_j + (SPNIRP_j * PA1)$$

(ii) where  $TQEI_j > 0$

$$NIRP_j = SPNIRP_j - (SPNIRP_j * PA2)$$

(iii) where  $TQEI_j = 0$

$$NIRP_j = 0$$

where in respect of the relevant period  $t$ , the terms PA1 and PA2 shall have the value ascribed to those terms in the following table:

<b>PA1</b>	1.5
<b>PA2</b>	0.5

**No amendments are proposed to paragraphs B5 – B14 inclusive of this Special Condition, with one exception as outlined below.**

**One of the  $ISF_t$  values contained within paragraph B5 (e) will be revised as part of this proposed licence modification. However, the  $CSOC_t$  values contained within paragraph B5 (e) are the subject of a separate live proposed licence modification. The following table highlights the proposed modifications to one of the  $ISF_t$  values in paragraph B5 (e) only. The  $CSOC_t$  values are intentionally omitted as these are the subject of the separate live proposed licence modification.**

<b>(<math>CSOC_t</math>) (£)</b>	<b><math>ISF_t</math></b>
	0.40
	0.40 where the BETTA go-live date is a date later than 1 April 2005, for the period from and

	<p>including 1 April 2005 up to the BETTA go-live date or up to and including 31 March 2006, if this is earlier than the BETTA go-live date, only.</p> <p>0.20 where the BETTA go-live date is a date later than 1 April 2005, for the period from and including the BETTA go-live date, if this is earlier than or on 31 March 2006, up to and including 31 March 2006 only.</p> <p>0.20 where the BETTA go-live date is 1 April 2005, for the relevant period t.</p>
--	--

## Appendix 2 Historic incentive scheme structure

### *Details of the external SO incentive schemes under NETA*

2.1 There have been four external SO incentive schemes under NETA. The initial incentive scheme ran from 27 March 2001 (the go-live date for NETA) to 31 March 2002, the second ran from 1 April 2002 to 31 March 2003 and the third from 1 April 2003 until 31 March 2004. The current SO incentive scheme commenced on 1 April 2004 and is due to expire on 31 March 2005. The parameters of all four external cost incentive schemes to date are outlined in Table A2.1. The structure of all four external cost incentive schemes to date is shown graphically in Figure A2.1.

**Table A2.1 – SO external cost incentive parameters since NETA go-live (money of the day)**

Parameter	2001/02 scheme <sup>68</sup>	2002/03 scheme	2003/04 scheme	2004/05 scheme
Target	£484.6 million to £514.4 million	£460 million	£416 million	£415 million
Upside sharing factor <sup>69</sup>	40%	60%	50%	40%
Downside sharing factor <sup>70</sup>	12%	50%	50%	40%
Cap	£46.3 million	£60 million	£40 million	£40 million
Floor	-£15.4 million	-£45 million	-£40 million	-£40 million

---

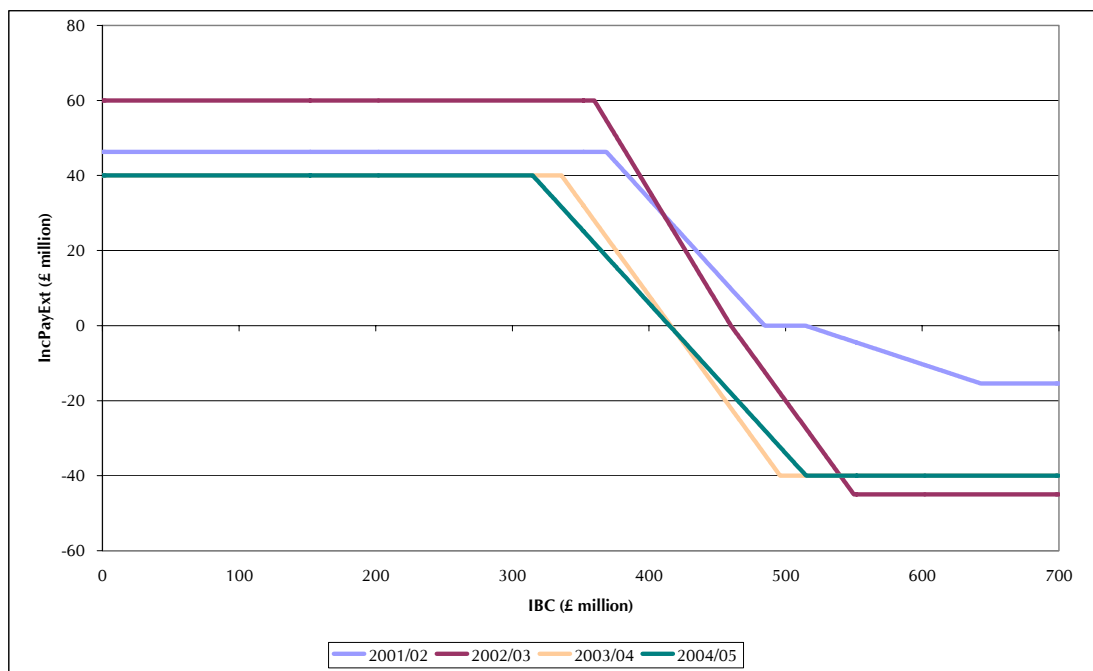
<sup>68</sup> The figures presented in relation to the initial incentive scheme represent the finalised parameters for the scheme following adjustments to reflect that the scheme was 370 days in duration, not 365 days, and inflation indexation at 1.5 per cent.

<sup>69</sup> The upside sharing factor is the proportion of any cost savings which NGC keeps as an incentive payment.

<sup>70</sup> The downside sharing factor is the proportion of any cost overruns to which NGC is exposed.



**Figure A2.1 – Incentive structure under the SO external cost schemes (money of the day)**



2.2 The lower target for the current incentive scheme reflects NGC's improved understanding of operating the system under NETA gained during the first three years of NETA. The current incentive scheme target continues to place commercial incentives on NGC to manage its system operation costs on behalf of customers.

2.3 NGC's SO incentive scheme payment or receipt is determined by the level of its Incentivised Balancing Costs (IBC) at the end of the incentive period. IBC are calculated from a number of different components:

- ◆ the cost of bids and offers in the Balancing Mechanism accepted in the relevant period less the total non-delivery charge for that period. This is referred to as Daily System Operator Balancing Mechanism Cashflow (CSOBM);
- ◆ the costs of contracts for the availability or use of balancing services, excluding costs covered by CSOBM (but including charges made by the SO for the provision of balancing services to itself), i.e. this component consists of the costs of balancing services not procured through the Balancing Mechanism. This is referred to as Balancing Services Contract Costs (BSCC);

- ◆ the volume of transmission losses multiplied by the Transmission Losses Reference Price (TLRP) for each Settlement Period, summed across all Settlement Periods. This is referred to as the Transmission Losses Adjustment (TLA);
- ◆ the system imbalance volume multiplied by the Net Imbalance Volume Reference Price (NIRP) for each Settlement Period, summed across all Settlement Periods. This factor, the Net Imbalance Adjustment (NIA), is deducted from CSOBM to reflect the fact that NGC has little control over the extent to which participants choose not to balance their positions;
- ◆ the revenue from the provision of balancing services to others (OM) during relevant incentive period; and
- ◆ the amount of any allowed income adjustment (RT) during the relevant incentive period.

# Appendix 3 Incentivised Balancing Cost component breakdown

## ***Balancing Mechanism Costs (CSOBM)***

### ***Licence definition***

- 3.1 Under NGC's Transmission Licence CSOBM<sub>t</sub> is defined as the cost to the licensee of bids and offers in the Balancing Mechanism accepted by the licensee in relevant period t<sup>71</sup> less the total non-delivery charge for that period. CSOBM<sub>t</sub> is the sum across the relevant period of the values of CSOBM<sub>j</sub> (being the Daily System Operator Balancing Mechanism Cashflow as defined in Table X-2 of Section X of the BSC in force immediately prior to 1 April 2001).

### ***Performance to date***<sup>72</sup>

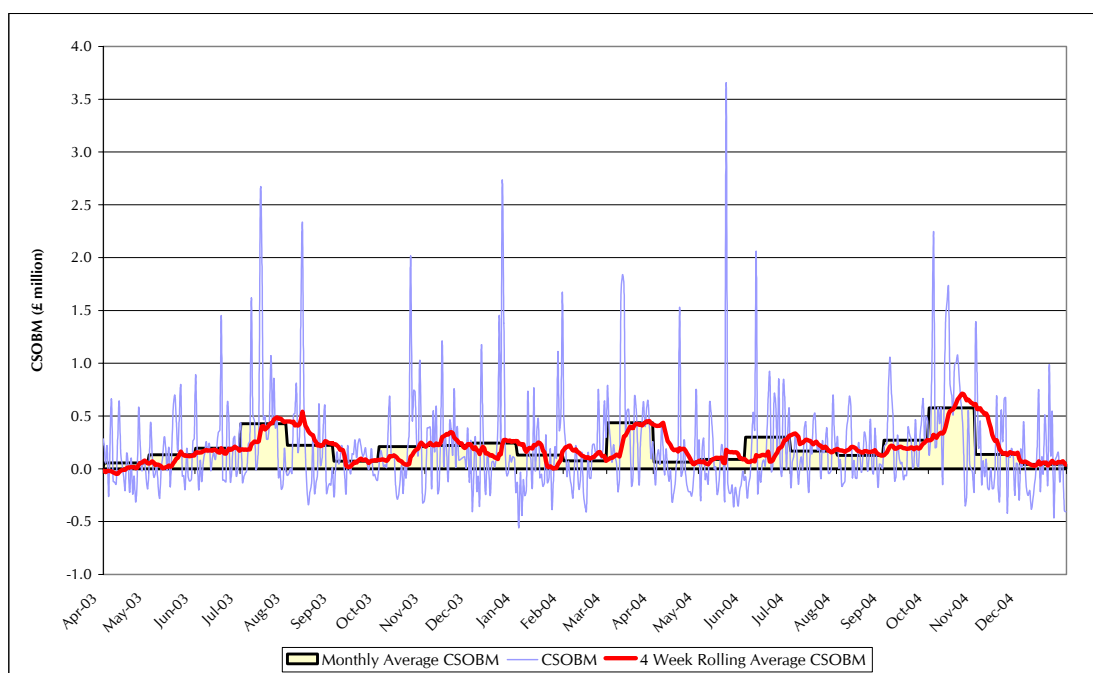
- 3.2 CSOBM<sub>t</sub> over the period from 1 April 2003 until 31 March 2004 totalled £74.45 million. Cumulative daily CSOBM from 1 April 2004 until 31 December 2004 was £54.23 million. Figure A3.1 shows daily CSOBM, monthly average CSOBM and a four-week rolling average of CSOBM for the period between 1 April 2003 and 31 December 2004.

---

<sup>71</sup> The transmission licence defines "relevant period t" as that period for the purposes of which any calculation falls to be made commencing on go-live and ending on 31 March 2002 and thereafter shall have the same meaning as "relevant year t" where "relevant year t" means that relevant year for the purposes of which any calculation falls to be made.

<sup>72</sup> Similar analysis and commentary for the period prior to 1 April 2002 can be found in 'NGC system operator incentive scheme from 1 April 2003 – 31 March 2004, final proposals and statutory licence conditions', March 2003, Ofgem, at the following address:  
[http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/2545\\_16so\\_incentives.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/2545_16so_incentives.pdf)

**Figure A3.1 – CSOBM from 1 April 2003 until 31 December 2004 (money of the day)**



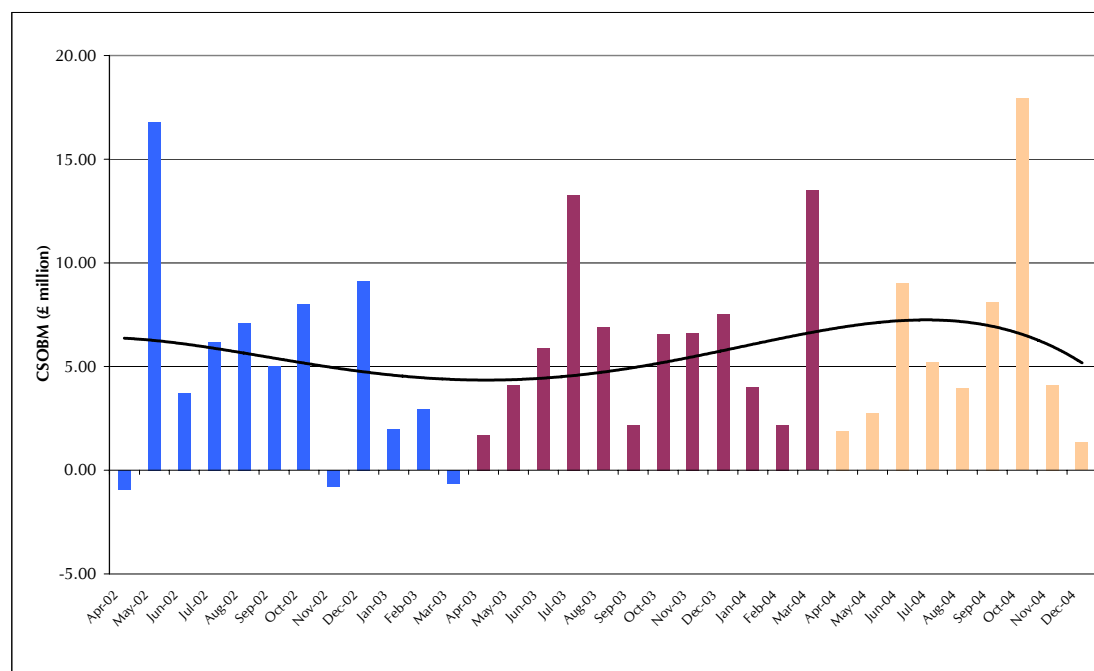
3.3 During the first year of NETA, CSOBM fell consistently in response to a number of factors, amongst which were NGC's and market participants' growing experience of the new arrangements. CSOBM was much more volatile during the second year of NETA, with the first two months of the financial year totalling -£0.93 million and £16.80 million for April 2002 and May 2002 respectively. Further CSOBM spikes occurred in July 2003 and March 2004, reaching the fourth and third highest monthly total since NETA go-live at £13.28 million and £13.50 million respectively.

3.4 Financial year 2003/04 has seen monthly CSOBM remain positive, mainly as a consequence of the system becoming closer to balance, and the cashflows associated with bid volumes reduced. The seven months from April 2004 show a rapid increase in CSOBM, most notably in October 2004, where costs rose to the highest level since April 2001, at £17.91 million. Beyond October, however, there has been a substantial reduction in the monthly costs of CSOBM, with December 2004 falling to just £1.33 million. More detailed statistics concerning CSOBM can be found in Table A3.1 and Figure A3.2.

Table A3.1 – Monthly CSOBM statistics (£ million, money of the day)<sup>73</sup>

Month	Sum	Average	Min	Max	Standard deviation
Apr-03	1.70	0.06	-0.32	0.65	0.26
May-03	4.12	0.13	-0.27	0.78	0.27
Jun-03	5.87	0.20	-0.20	1.45	0.34
Jul-03	13.28	0.43	-0.19	2.62	0.64
Aug-03	6.90	0.22	-0.34	2.31	0.56
Sep-03	2.18	0.07	-0.27	0.28	0.14
Oct-03	6.56	0.21	-0.32	2.02	0.47
Nov-03	6.61	0.22	-0.23	1.21	0.32
Dec-03	7.54	0.24	-0.40	2.72	0.64
Jan-04	4.01	0.13	-0.56	1.67	0.47
Feb-04	2.18	0.08	-0.40	0.75	0.27
Mar-04	13.50	0.44	-0.22	1.84	0.51
Apr-04	1.88	0.06	-0.31	1.53	0.35
May-04	2.73	0.09	-0.36	3.66	0.71
Jun-04	9.02	0.30	-0.28	2.06	0.48
Jul-04	5.19	0.17	-0.22	0.69	0.21
Aug-04	3.94	0.13	-0.18	0.69	0.23
Sep-04	8.12	0.27	-0.11	1.06	0.29
Oct-04	17.91	0.58	-0.35	2.23	0.61
Nov-04	4.11	0.14	-0.41	1.35	0.40
Dec-04	1.33	0.04	-0.46	0.99	0.34

Figure A3.2 – Monthly CSOBM statistics including trendline (money of the day)



<sup>73</sup> For tables A3.1 to A3.4, each IBC component shows total cashflow for the month, average daily cashflow and minimum, maximum and standard deviation figures over the course of each month.

## ***Balancing Services Contract Costs (BSCC)***

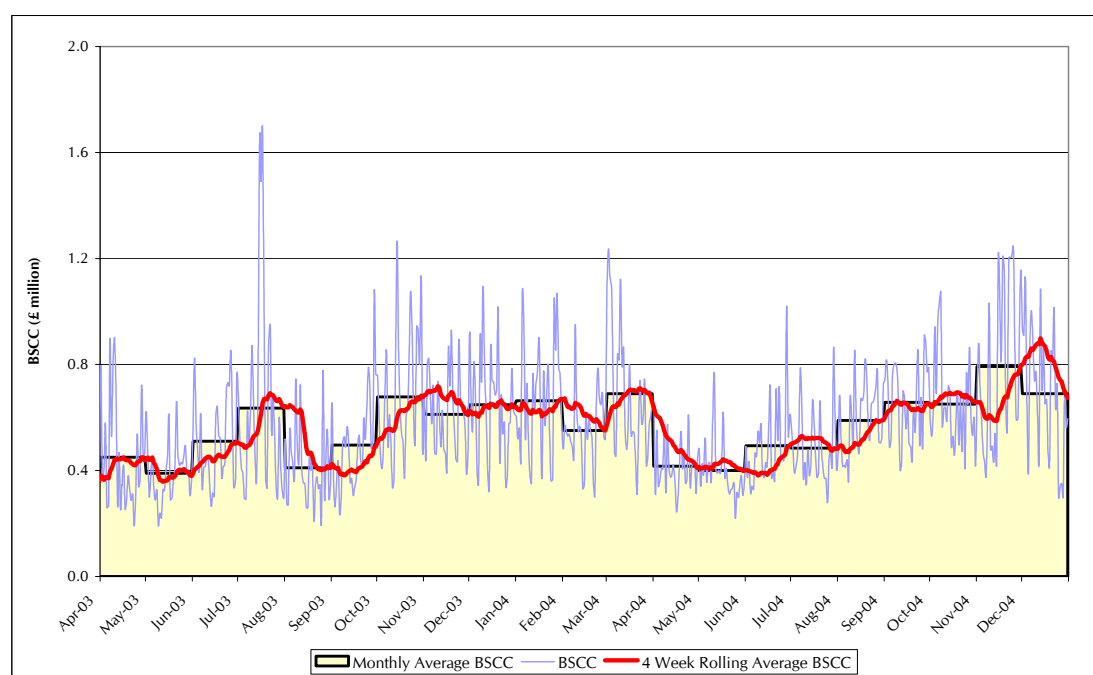
### ***Licence definition***

- 3.5 Under NGC's Transmission Licence,  $BSCC_t$  is defined as the costs to the licensee of contracts for the availability or use of balancing services during the relevant period  $t$ , excluding costs within  $CSOBM_t$  but including charges made by the licensee for the provision of balancing services to itself in the relevant period  $t$ .
- 3.6  $BSCC_t$  are the costs of the payments that NGC makes under contract to the providers of balancing services excluding any costs paid through the Balancing Mechanism. This includes costs associated with the procurement of energy, reserve, frequency response, some transmission constraints, black start and reactive power. All these costs are bundled together as BSCC for the purposes of the IBC calculation.

### ***Performance to date***

- 3.7  $BSCC_t$  over the period from 1 April 2003 to 31 March 2004 totalled £205.51 million. Cumulative daily BSCC from 1 April 2004 until 31 December 2004 was £157.98 million. Figure A3.3 shows daily BSCC, monthly average BSCC and a four-week rolling average of BSCC for the period between 1 April 2003 and 31 December 2004.

**Figure A3.3 – BSCC from 1 April 2003 until 31 December 2004 (money of the day)**



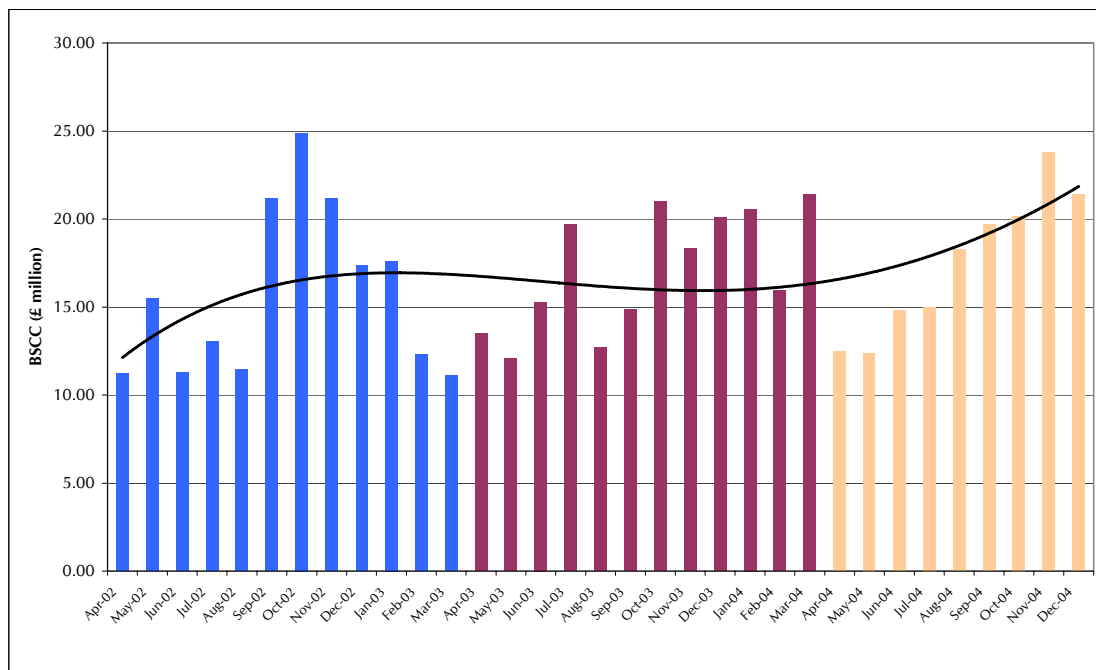
3.8 As was the case for the year from NETA go-live, total monthly BSCC fluctuated over the first half of the financial year 2002/2003. Between August 2002 and September 2002, total monthly BSCC almost doubled from £11.46 million to £21.17 million. Monthly total BSCC climbed to a peak of £24.88 million in October 2002. BSCC remained high over the winter period before slowly falling to £11.12 million in March 2003. The second half of financial year 2003/04 saw BSCC remaining in a high range between £15.96 million (February 2004) and £21.39 million (March 2004). BSCC dramatically fell back in April 2004, with the lowest monthly sum for a year at £12.48 million. Beyond April 2004, BSCC rose in each consecutive month, to reach the second highest levels under NETA, in November 2004 at £23.78 million, before falling back slightly in December 2004. More detailed statistics concerning BSCC are presented in Table A3.2 and Figure A3.4.

**Table A3.2 – Monthly BSCC statistics (£ million, money of the day)**

Month	Sum	Average	Min	Max	Standard deviation
Apr-03	13.50	0.45	0.19	0.90	0.20
May-03	12.07	0.39	0.19	0.66	0.11
Jun-03	15.30	0.51	0.27	0.85	0.17
Jul-03	19.71	0.64	0.29	1.68	0.38
Aug-03	12.72	0.41	0.21	0.78	0.15
Sep-03	14.87	0.50	0.23	1.08	0.18

Month	Sum	Average	Min	Max	Standard deviation
Oct-03	21.01	0.68	0.33	1.27	0.24
Nov-03	18.34	0.61	0.39	0.93	0.15
Dec-03	20.09	0.65	0.33	1.09	0.20
Jan-04	20.56	0.66	0.35	1.07	0.21
Feb-04	15.96	0.55	0.31	0.95	0.13
Mar-04	21.39	0.69	0.32	1.24	0.24
Apr-04	12.48	0.42	0.24	0.65	0.10
May-04	12.39	0.40	0.22	0.77	0.11
Jun-04	14.81	0.49	0.31	1.02	0.15
Jul-04	15.00	0.48	0.28	0.86	0.13
Aug-04	18.26	0.59	0.37	0.85	0.13
Sep-04	19.70	0.66	0.40	0.91	0.15
Oct-04	20.17	0.65	0.41	1.07	0.17
Nov-04	23.78	0.79	0.38	1.24	0.30
Dec-04	21.38	0.69	0.30	1.12	0.24

Figure A3.4 – Monthly BSCC statistics including trendline (money of the day)



## ***Transmission Losses (TL) and Transmission Losses***

### ***Reference Price (TLRP)***

### ***Licence definition***

3.9 Under NGC's Transmission Licence,  $\sum_{it}(TL_i[TLRP_i])$ , referred to as the Transmission Losses Adjustment (TLA), is defined as the volume of Transmission



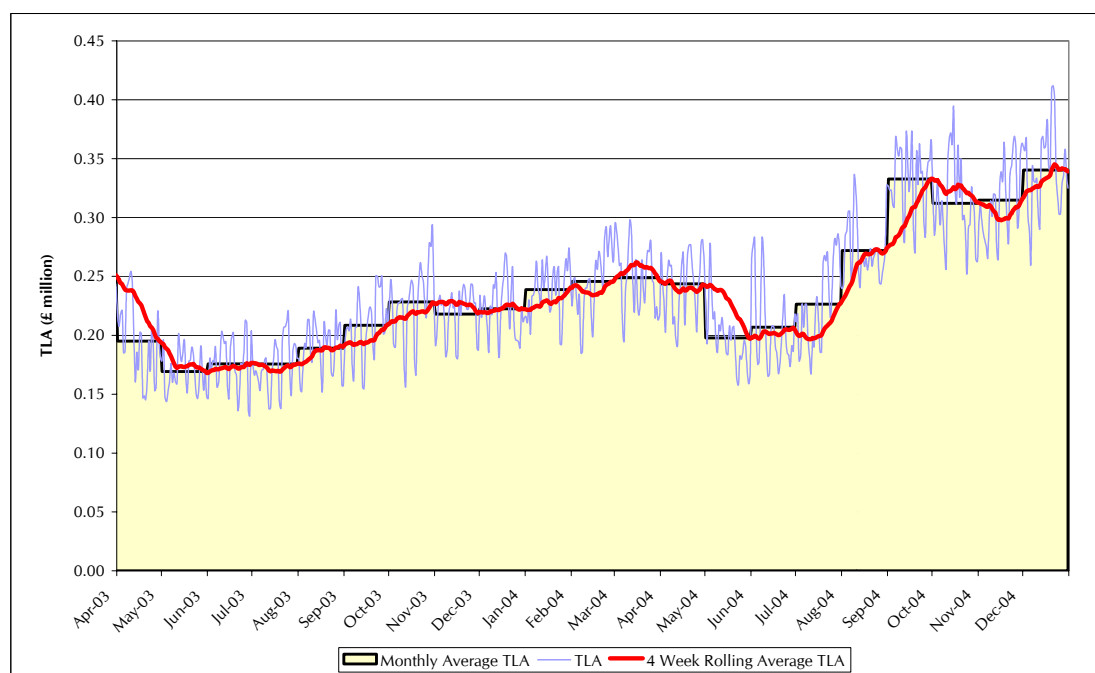
Losses ( $TL_j$ ) multiplied by the Transmission Losses Reference Price (TLRP<sub>j</sub>) for each Settlement Period, summed across all Settlement Periods in the relevant period  $t$ . It is the difference between the quantities of electricity delivered to the licensee's transmission system and the quantity taken from the licensee's transmission system during that Settlement Period, but excluding all generator transformer losses.

- 3.10 NGC has incentives to reduce the overall volume of losses and a reference price (TLRP) is required to allow a cost target to be included in IBC. TLRP<sub>j</sub> has the value specified for each Settlement Period set out in paragraph B3 of Part B of Schedule A of NGC's Transmission Licence. During the period from 27 March 2001 until 31 March 2002, TLRP was fixed at £20.30/MWh (after indexation). It was reduced to £18.50/MWh for the period from 1 April 2002 until 31 March 2003. For the period between 1 April 2003 and 31 March 2004, TLRP was again reduced to £17.00/MWh. TLRP was further revised for the incentive scheme period between 1 April 2004 and 31 March 2005 to £21.00/MWh.

### ***Performance to date***

- 3.11 Over the period from 1 April 2003 until 31 March 2004,  $TLA_t$  totalled £76.68 million. Cumulative daily TLA from 1 April 2004 until 31 December 2004 was £74.75 million. Figure A3.5 shows daily TLA, monthly average TLA and a four-week rolling average of TLA for the period between 1 April 2003 and 31 December 2004.

**Figure A3.5 – TLA from 1 April 2003 until 31 December 2004 (money of the day)**



3.12 Historically, TLA has been the least volatile of the IBC components because of the annually fixed nature of TLRP. Moreover, the value of TLA depends only on the volume of transmission losses in any given period. As the transmission losses volume is a function of the volume of electricity generated (or demanded), there is a clear correlation between seasonal demand patterns and the value of TLA.

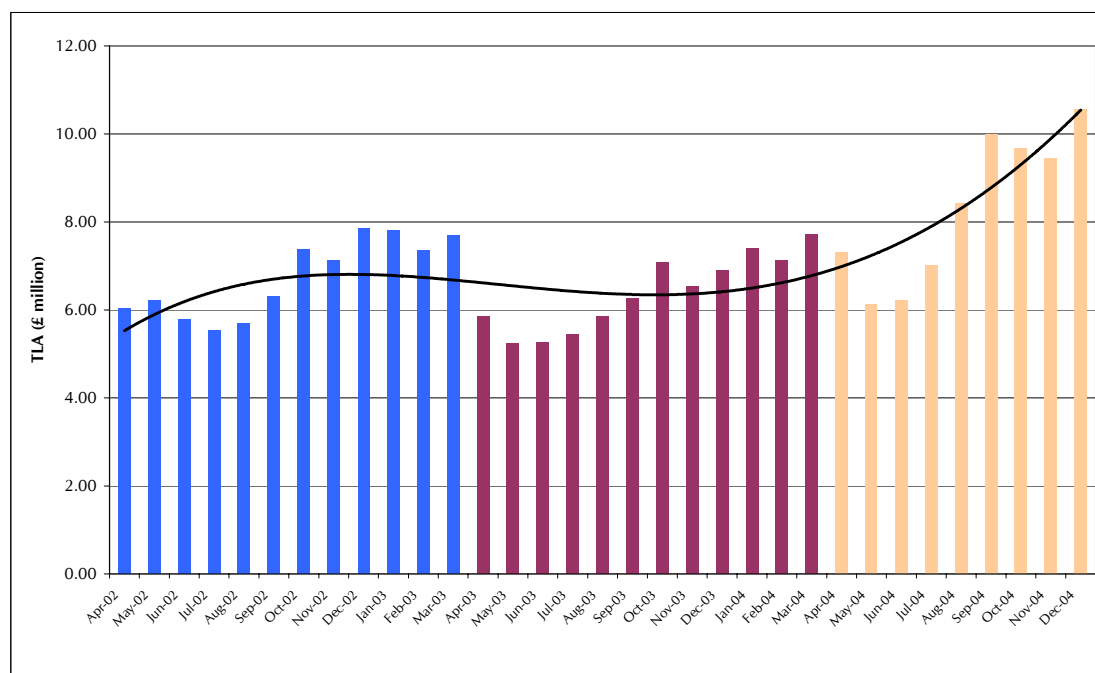
3.13 The value of TLRP itself has been altered on an annual basis. As a result of alterations to TLRP, the value of TLA has changed slightly year-on-year. For the incentive scheme period 2002/03 the spread between maximum daily TLA and minimum daily TLA was £0.18 million, whilst for the 2003/04 incentive scheme this figure fell slightly to £0.17 million. For the earlier part of the current incentive scheme, TLA was much less volatile, with the range being around £0.13 million<sup>74</sup>. However, from August 2004, the range rose considerably. December 2004 accounts for the highest costs for TLA under NETA at £10.6 million, although this is mainly the result of the higher value for TLRP, rather than a tangible increase in the volume of transmission losses. More detailed statistics concerning TLA are presented in Table A3.3 and Figure A3.6.

<sup>74</sup> Accounting for rounding.

Table A3.3 – Monthly TLA statistics (£ million, money of the day)

Month	Sum	Average	Min	Max	Standard deviation
Apr-03	5.85	0.19	0.15	0.25	0.03
May-03	5.25	0.17	0.14	0.20	0.02
Jun-03	5.27	0.18	0.13	0.21	0.02
Jul-03	5.44	0.18	0.14	0.22	0.02
Aug-03	5.86	0.19	0.15	0.22	0.02
Sep-03	6.25	0.21	0.15	0.25	0.03
Oct-03	7.08	0.23	0.16	0.29	0.03
Nov-03	6.54	0.22	0.18	0.24	0.02
Dec-03	6.90	0.22	0.18	0.27	0.02
Jan-04	7.40	0.24	0.19	0.27	0.02
Feb-04	7.13	0.25	0.19	0.29	0.03
Mar-04	7.71	0.25	0.20	0.30	0.03
Apr-04	7.31	0.24	0.19	0.28	0.03
May-04	6.13	0.20	0.16	0.28	0.03
Jun-04	6.20	0.21	0.17	0.28	0.04
Jul-04	7.02	0.23	0.17	0.29	0.04
Aug-04	8.43	0.27	0.24	0.34	0.03
Sep-04	9.98	0.33	0.27	0.37	0.03
Oct-04	9.67	0.31	0.25	0.39	0.04
Nov-04	9.45	0.31	0.27	0.37	0.03
Dec-04	10.55	0.34	0.26	0.41	0.04

Figure A3.6 – Monthly TLA statistics including trendline (money of the day)



## ***Total Net Energy Imbalance Volume (TQEI) and the Net Imbalance Volume Reference Price (NIRP)***

### ***Licence definition***

- 3.14 Under NGC's Transmission Licence,  $\sum_t(TQEI_t[NIRP_t])$ , referred to as the Net Imbalance Adjustment (NIA), is defined as the Total Net Imbalance Volume<sup>75</sup> (TQEI<sub>t</sub>), as defined in the BSC in force immediately prior to 1 April 2001, multiplied by the Net Imbalance Volume Reference Price (NIRP<sub>t</sub>) for each Settlement Period, summed across all Settlement periods in the relevant period t.
- 3.15 NIRP<sub>t</sub> has the value specified for each Settlement Period set out in paragraph B4 of Part B of Schedule A to NGC's Transmission Licence. During the period from 27 March 2001 until 31 March 2002, NIRP<sub>t</sub> was based on imbalance prices using the definitions of System Buy Price (SBP) and System Sell Price (SSP) included in the version of the BSC in force immediately prior to 1 April 2001. Whether SBP or SSP applied was dependent upon TQEI. NIRP was set to be equal to SBP when the system was short, i.e. TQEI < 0, SSP when the system was long, i.e. TQEI > 0, and zero when the system was in balance.
- 3.16 The definition of NIRP was changed ahead of the 2002/03 incentive scheme. The first stage in deriving NIRP<sub>t</sub> is now to calculate the Single Price Net Imbalance Volume Reference Price for the settlement period (SPNIRP<sub>t</sub>). This is a market based reference price calculated from a basket of power exchange prices (the United Kingdom Power Exchange (UKPX) and United Kingdom Automated Power Exchange (UK APX)). A variable price adjustment is then applied to SPNIRP<sub>t</sub> to give NIRP<sub>t</sub>. When the system is long SPNIRP<sub>t</sub> is multiplied by 0.5 whereas when the system is short it is multiplied by 2.5.

### ***Performance to date***

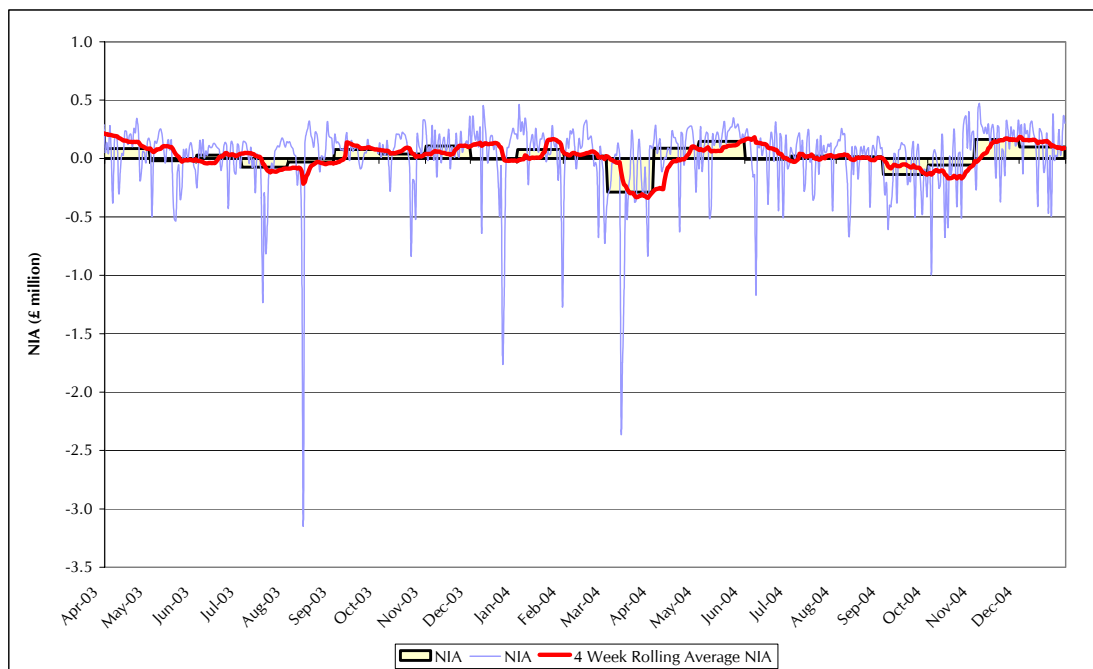
- 3.17 NIA<sub>t</sub> over the period from 1 April 2003 until 31 March 2004 totalled £0.42 million. Cumulative daily NIA from 1 April 2004 until 31 December 2004 was

---

<sup>75</sup> The total net imbalance volume is the sum of all imbalance volumes over all energy accounts other than energy accounts held by the Transmission Company.

£10.31 million. Figure A3.7 shows daily NIA, monthly average NIA and a four-week rolling average of NIA for the period between 1 April 2003 and 31 December 2004.

**Figure A3.7 – NIA from 1 April 2003 until 31 December 2004 (money of the day)**



3.18 For the most part, NIA has historically been positive because the system has tended to be long. This means that the TQEI element of NIA has been positive and contributes to the magnitude of IBC. Over time, the tendency to be long has lessened, and fell substantially upon implementation of BSC Modification P78<sup>76</sup> on 11 March 2003.

3.19 For a number of months under each incentive scheme period, average monthly NIA has actually been negative. This does not necessarily mean that the system has been short as the value of NIRP is greater when the system is short than when it is long. However, the 2003/04 incentive scheme has demonstrated the effects of the system becoming closer to balance. Five of the twelve months show a negative value for NIA, whilst the net value itself for the period is slightly above zero. NIA in March 2004 reached the lowest point since NETA go-live at -£8.95 million, indicative of a number of tight days on the system. September

<sup>76</sup> Information concerning BSC Modification P78 "Revised definitions of system buy price and system sell price" can be found on ELEXON's website at <http://www.elexon.co.uk>.

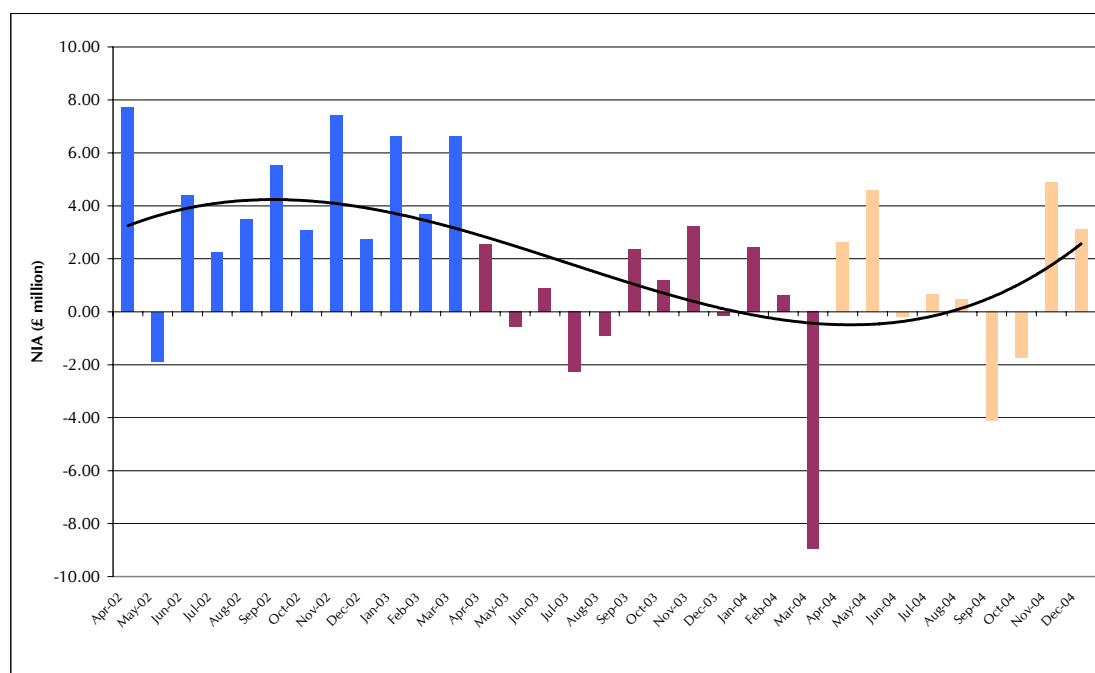
2004 and October 2004 were also reasonably tight days with high imbalance prices and forward prices, and as a result are negative values. The high negative NIA in these months coincide with high positive CSOBM and BSCC costs as it was necessary for NGC to contract for large volumes of balancing actions. In November 2004 and December 2004 however, the system has been considerably longer, and as a result NIA has been positive. November 2004 has the largest positive NIA value since March 2003 at £4.90 million.

3.20 With this in mind, the system has shown negative NIA costs for 29 per cent of the days in financial year 2003/04 (106 days out of 366 days). For the current incentive scheme period this figure has risen to 31 per cent (84 days from 275 days). In comparison, from NETA go-live to 31 March 2003, this figure was just 15 per cent (110 days out of 735 days). More detailed statistics concerning NIA are presented in Table A3.4.

**Table A3.4 – Monthly NIA statistics (£ million, money of the day)**

<b>Month</b>	<b>Sum</b>	<b>Average</b>	<b>Min</b>	<b>Max</b>	<b>Standard deviation</b>
<b>Apr-03</b>	2.55	0.09	-0.38	0.34	0.17
<b>May-03</b>	-0.57	-0.02	-0.53	0.25	0.22
<b>Jun-03</b>	0.90	0.03	-0.43	0.16	0.13
<b>Jul-03</b>	-2.27	-0.07	-1.23	0.17	0.31
<b>Aug-03</b>	-0.90	-0.03	-3.14	0.32	0.61
<b>Sep-03</b>	2.35	0.08	-0.09	0.22	0.07
<b>Oct-03</b>	1.19	0.04	-0.84	0.33	0.24
<b>Nov-03</b>	3.21	0.11	-0.16	0.36	0.12
<b>Dec-03</b>	-0.14	0.00	-1.73	0.44	0.45
<b>Jan-04</b>	2.42	0.08	-1.27	0.46	0.30
<b>Feb-04</b>	0.63	0.02	-0.71	0.33	0.26
<b>Mar-04</b>	-8.95	-0.29	-2.30	0.24	0.55
<b>Apr-04</b>	2.64	0.09	-0.63	0.29	0.19
<b>May-04</b>	4.59	0.15	-0.51	0.35	0.19
<b>Jun-04</b>	-0.18	-0.01	-1.17	0.31	0.30
<b>Jul-04</b>	0.66	0.02	-0.45	0.25	0.17
<b>Aug-04</b>	0.45	0.01	-0.67	0.26	0.20
<b>Sep-04</b>	-4.12	-0.14	-0.61	0.14	0.22
<b>Oct-04</b>	-1.73	-0.06	-0.99	0.40	0.32
<b>Nov-04</b>	4.90	0.16	-0.37	0.47	0.19
<b>Dec-04</b>	3.10	0.10	-0.49	0.37	0.23

**Figure A3.8 – Monthly NIA statistics including trendline (money of the day)**



## ***Other Allowed Income (RT) and Balancing Services provided to others (OM)***

### ***Licence definition***

- 3.21 Under NGC’s Transmission Licence,  $RT_t$  is defined as the amount of any allowed income adjustment, given by paragraph 12(b) of special condition AA5A, in respect of relevant period  $t$ .
- 3.22 NGC’s Transmission Licence defines  $OM_t$  as the amount representing the revenue from the provision of balancing services to others during relevant period  $t$ , calculated in accordance with paragraph 7 of special condition AA5A.

### ***Performance to date***

- 3.23 From the introduction of NETA to date, OM has been zero, whilst RT has been non-zero for two events. RT can only be non-zero if Ofgem agrees to a change to the incentive scheme target as a result of an Income Adjusting Event (IAE). To date, NGC is the only party to have issued a notice to the Authority outlining costs or expenses incurred or saved which it considered to relate to an IAE, although it is open for any BSC Party to raise an IAE to the Authority. In March

2003, NGC gave notice to Ofgem that it considered an IAE had occurred during November 2002. The Authority approved the proposed IAE in June 2003 and RT was assigned a value of £5.34 million (and so reduced IBC by £5.34 million)<sup>77</sup>. Furthermore, in April 2004, NGC gave notice to Ofgem that it considered an IAE had occurred during November 2003. The Authority approved the proposed IAE in July 2004 and RT was assigned a value of £5.54 million (and so reduced IBC by £5.54 million)<sup>78</sup>.

## ***Contribution of components to IBC***

3.24 In addition to examining the trends of the individual components of IBC, an examination of each component's relative contribution to IBC throughout the period is set out below. Tables A3.5 and A3.6 provide a breakdown of average monthly IBC component totals and their contributions to IBC.

**Table A3.5 – Average monthly IBC component totals (£ million, money of the day)<sup>79</sup>**

<b>Period</b>	<b>CSOBM</b>	<b>BSCC</b>	<b>TLA</b>	<b>NIA</b>	<b>IBC</b>
<b>Go-Live to Dec-04</b>	5.50	15.26	7.03	2.61	30.41
<b>Go-Live to Mar-02</b>	5.05	11.59	7.03	4.45	28.12
<b>Apr-02 to Mar-03</b>	4.88	15.67	6.73	4.31	31.58
<b>Apr-03 to Mar-04</b>	6.20	17.13	6.39	0.03	29.75
<b>Apr-04 to Dec-04</b>	6.03	17.55	8.31	1.15	33.03

**Table A3.6 – Average monthly IBC components as proportion of IBC<sup>80</sup>**

<b>Period</b>	<b>CSOBM</b>	<b>BSCC</b>	<b>TLA</b>	<b>NIA</b>
<b>Go-Live to Dec-04</b>	18%	50%	23%	9%
<b>Go-Live to Mar-02</b>	18%	41%	25%	16%
<b>Apr-02 to Mar-03</b>	15%	50%	21%	14%
<b>Apr-03 to Mar-04</b>	21%	58%	21%	0%
<b>Apr-04 to Dec-04</b>	18%	53%	25%	3%

3.25 Monthly total CSOBM averaged £4.88 million for the period from 1 April 2002 until 31 March 2003 equating to a contribution of 15 per cent to overall IBC

<sup>77</sup> Full details can be found in 'Income adjusting event under NGC's 2002/03 system operator incentive scheme, a decision document', June 2003, Ofgem at the following address:

[http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/3775\\_Drax\\_IAE\\_DecisionvFINAL1.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/3775_Drax_IAE_DecisionvFINAL1.pdf)

<sup>78</sup> Full details can be found in 'Income adjusting event under NGC's 2003/04 system operator incentive scheme, a decision document', July 2004, Ofgem at the following address:

[http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/7765\\_15304\\_income\\_adjusting.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/7765_15304_income_adjusting.pdf)

<sup>79</sup> This table shows monthly sums for each IBC component and averaged for each time period.

<sup>80</sup> This table shows monthly sums for each IBC component, averaged per time period as a proportion of the sum of IBC per month, averaged over each time period.



over this period. For financial year 2003/04, this rose to £6.20 million, accounting for 21 per cent of IBC. During the current incentive scheme period, CSOBM has fallen to an average of £6.20 million, equivalent to 18 per cent of IBC. Despite the costly increase in margin actions in October 2004, November 2004 and December 2004 showed a substantial decrease in CSOBM, offsetting the costs of these margin actions. Over the entire period since NETA go-live, CSOBM has accounted for 18 per cent of IBC, averaging £5.50 million each month.

- 3.26 Monthly total BSCC averaged £15.67 million for the period from 1 April 2002 until 31 March 2003, which is almost £4.1 million higher than average BSCC under the initial incentive scheme post NETA go-live. Over the course of financial year 2003/04, BSCC rose to a monthly average of £17.13 million, equivalent to 58 per cent of IBC. During the current incentive scheme period, BSCC has averaged £17.55 million, accounting for a smaller proportion of IBC at 53 per cent. BSCC continues to make the largest contribution to IBC of all its components.
- 3.27 Monthly total TLA averaged £6.73 million for the period from 1 April 2002 until 31 March 2003, accounting for 21 per cent of IBC. This figure fell back to £6.39 million for financial year 2003/04, whilst retaining a 21 per cent share of IBC. Over the current incentive scheme period to 31 December 2004, monthly total TLA has averaged £8.31 million, representing 25 per cent of IBC. TLA has accounted for around 23 per cent of total IBC costs over the entire period from NETA go-live until 31 December 2004.
- 3.28 Monthly total NIA averaged £4.31 million for the period from 1 April 2002 until 31 March 2003, accounting for 14 per cent of IBC. NIA fell back to a fraction above zero at £0.03 million for incentive scheme 2003/04, before rising for the current scheme. Total monthly NIA has averaged £1.15 million from the period between 1 April 2004 and 31 December 2004. This is equivalent to three per cent of average monthly IBC over this period.
- 3.29 Additional detail is provided in the tables below. Table A3.7 presents the monthly values of each of the components of IBC, while Table A3.8 shows each component's monthly percentage contribution to IBC.

**Table A3.7 – Monthly IBC component totals (£ million, money of the day)**

Month	CSOBM	BSCC	TLA	NIA	IBC
Apr-03	1.70	13.50	5.85	2.55	23.60
May-03	4.12	12.07	5.25	-0.57	20.87
Jun-03	5.87	15.30	5.27	0.90	27.34
Jul-03	13.28	19.71	5.44	-2.27	36.15
Aug-03	6.90	12.72	5.86	-0.90	24.58
Sep-03	2.18	14.87	6.25	2.35	25.66
Oct-03	6.56	21.01	7.08	1.19	35.84
Nov-03	6.61	18.34	6.54	3.21	34.71
Dec-03	7.54	20.09	6.90	-0.14	34.39
Jan-04	4.01	20.56	7.40	2.42	34.39
Feb-04	2.18	15.96	7.13	0.63	25.89
Mar-04	13.50	21.39	7.71	-8.95	33.65
Apr-04	1.88	12.48	7.31	2.64	24.32
May-04	2.73	12.39	6.13	4.59	25.84
Jun-04	9.02	14.81	6.20	-0.18	29.85
Jul-04	5.19	15.00	7.02	0.66	27.87
Aug-04	3.94	18.26	8.43	0.45	31.09
Sep-04	8.12	19.70	9.98	-4.12	33.68
Oct-04	17.91	20.17	9.67	-1.73	46.03
Nov-04	4.11	23.78	9.45	4.90	42.24
Dec-04	1.33	21.38	10.55	3.10	36.36

**Table A3.8 – Monthly IBC components as proportion of IBC**

Month	CSOBM	BSCC	TLA	NIA
Apr-03	7%	57%	25%	11%
May-03	20%	58%	25%	-3%
Jun-03	21%	56%	19%	3%
Jul-03	37%	55%	15%	-6%
Aug-03	28%	52%	24%	-4%
Sep-03	8%	58%	24%	9%
Oct-03	18%	59%	20%	3%
Nov-03	19%	53%	19%	9%
Dec-03	22%	58%	20%	0%
Jan-04	12%	60%	22%	7%
Feb-04	8%	62%	28%	2%
Mar-04	40%	64%	23%	-27%
Apr-04	8%	51%	30%	11%
May-04	11%	48%	24%	18%
Jun-04	30%	50%	21%	-1%
Jul-04	19%	54%	25%	2%
Aug-04	13%	59%	27%	1%
Sep-04	24%	58%	30%	-12%
Oct-04	39%	44%	21%	-4%
Nov-04	10%	56%	22%	12%
Dec-04	4%	59%	29%	9%

# Appendix 4 Respondents to the Initial Proposals document

4.1 The following is a list of those who provided non-confidential responses to the December 2004 Initial Proposals document:

- ◆ British Energy
- ◆ Centrica
- ◆ Chemical Industries Association
- ◆ ConocoPhillips
- ◆ EdF Energy
- ◆ energywatch
- ◆ E.ON UK
- ◆ National Grid Transco
- ◆ RWE npower
- ◆ Scottish Power
- ◆ Scottish and Southern Energy
- ◆ The Association of Electricity Producers

# Appendix 5 BSC Modification Proposals and CUSC Amendment Proposals

5.1 Tables A5.1 and A5.2 respectively provide a list of those BSC Modification Proposals and CUSC Amendment Proposals for which the Income Adjusting Event (IAE) provisions will not be available. Unless otherwise specified, the IAE provisions are not available for either the original proposals or any alternative.

**Table A5.1 – BSC Modification Proposals for which the IAE provisions are not available**

<b>Modification Proposal</b>	<b>Modification Title</b>
P157	Replacement of current Supplier Charges rules
P171	Retrospective removal of Emergency Instructions taken for System reasons from Imbalance Price
P172	Removal of Emergency Instructions taken for System reasons from Imbalance Price
P173 (original only)	Revised Settlement Arrangements for Emergency Instructions
P174	Provision of Users of an Interconnector with a single Boundary Point connection to form a Trading Unit amongst themselves and with other BM Units at the same site
P176	Clarification of the Requirements for Estimation/Deeming of Meter Readings/Advances in Certain Circumstances to Facilitate Correction of Anomalies in Settlement Calculations
P177	Removal of Intertrip provisions from the BSC
P178	Reduction in the BSC withdrawal timescale for parties who have settled the vast majority of their trading debts
P179	Housekeeping Modification
P180	Reduction to BSC Modification implementation dates, where an Authority decision is referred to Appeal or Judicial Review
P182	Review and redefinition of the Non Half Hourly Settlement performance measures
P183	Additional Mechanisms for Obtaining a valid Change of Supplier Read
P184	Clarification of BSC Section W in relation to the application of the Query Deadline to Trading Queries/Disputes
P185	Redrafting of BSC Sections U and W in relation to clauses pertaining to the processing and rectification of Trading Queries/Disputes
P186	Rationalising the criteria for the submission and redeclaration of Demand & Generation Capacities

**Table A5.2 – CUSC Amendment Proposals for which the IAE provisions are not available**

<b>Amendment Proposal</b>	<b>Amendment Title</b>
---------------------------	------------------------

<b>Amendment Proposal</b>	<b>Amendment Title</b>
CAP075	Arrangements for Replacing Resigning Panel Members and Alternates
CAP076 (original only)	Treatment of System to Generator Intertripping Schemes
CAP077	Revision to CUSC Amendment Implementation Dates for Appeal or Judicial Review

# Appendix 6 The regulatory framework

## *Introduction*

- 6.1 This appendix summarises the current regulatory framework for the electricity industry. It outlines the current legislative, licensing and regulatory regimes and describes the relationship between the Electricity Act 1989, the Utilities Act 2000, licences and industry agreements.

## *The Electricity Act 1989*

- 6.2 The Electricity Act 1989, as amended by the Utilities Act 2000, provides the framework for the functions of the Gas and Electricity Markets Authority (the Authority) in respect of electricity and sets out the licensing regime in relation to the supply, distribution, generation and transmission of electricity.
- 6.3 Under section 9(2) of the Electricity Act 1989, holders of transmission licences are obliged to develop and maintain an efficient, co-ordinated and economical system of electricity transmission and to facilitate competition in the supply and generation of electricity.

## *The Utilities Act 2000*

- 6.4 The Utilities Act 2000 sets out the principal objective for the Authority, as defined in Section 3A of the Electricity Act. The Authority's principal objective in respect of electricity is "to protect the interests of customers in relation to electricity conveyed by distribution systems [or transmission systems]<sup>81</sup>, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the generation, transmission, distribution or supply of electricity or the provision of use of electricity interconnectors<sup>82</sup>".

---

<sup>81</sup> The words 'or transmission systems' were inserted by the Energy Act 2004, section 179(2), however a date has not yet been appointed for this change to come in to force.

<sup>82</sup> The words 'or the provision of use of electricity interconnectors' were inserted by the Energy Act 2004, section 147(2)(a), and this change has been in force from 1 December 2004 (SI 2004/2575).

## ***The Energy Act 2004***

- 6.5 The Energy Act 2004 introduced a requirement that, subject to its principal objective and its general duties, the Authority (and the Secretary of State) should, amongst other things, carry out its functions in a manner best calculated to contribute to the achievement of sustainable development<sup>83</sup>.
- 6.6 The Energy Act 2004 additionally requires that the Authority (and the Secretary of State) should carry out its functions having had regard to “the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed” and any other principles appearing to represent best regulatory practice<sup>84</sup>.

## ***NGC’s electricity transmission licence***

- 6.7 NGC owns and operates the national grid in E&W, which transports electricity at high voltage from the generators to the local distribution networks and to customers connected directly to the transmission system. NGC holds an electricity transmission licence which is treated as granted under section 6(1) of the Electricity Act 1989.
- 6.8 For the purposes of implementing BETTA, on and from 26 August 2004, the Secretary of State exercised her powers under sections 134 and 137, and paragraph 1 of Schedule 17, of the Energy Act 2004 to: determine new standard conditions in relation to transmission licences; make a scheme in relation to existing transmission licences; and modify the conditions of transmission, distribution, generation and supply licences, including transitional modifications. The changes came into effect on 1 September 2004.

---

<sup>83</sup> Section 83 of the Energy Act 2004 amends section 3A of the Electricity Act 1989 to this effect.

<sup>84</sup> Section 178 of the Energy Act 2004 amends section 3A of the Electricity Act 1989 to this effect.

## **Standard condition C16<sup>85</sup>**

6.9 NGC's transmission licence contains several provisions relating to information provision and transparency:

- ◆ standard condition C16(1) requires the licensee to co-ordinate and direct the flow of electricity onto and over the GB transmission system in an efficient, economic and co-ordinated manner; and
- ◆ standard condition C16(2) prohibits the licensee from discriminating as between any persons or classes of persons in its procurement or use of balancing services.

### **Standard condition C16 statements**

6.10 NGC is required to procure any balancing services competitively and via transparent processes. In order to fulfil this requirement, NGC is obliged under standard condition C16 of the transmission licence to have in place two particular documents<sup>86</sup>:

- ◆ the Procurement Guidelines (PGs), which detail the types of balancing services that NGC may be interested in purchasing, together with the mechanisms envisaged for purchasing such balancing services. Table 3 within Part E of the PGs outlines NGC's approach to providing information relating to its procurement of balancing services in order to provide market participants and other interested parties with sufficient information without compromising the commercial position of any contracting party.
- ◆ the Balancing Principles Statement (BPS), which defines the broad principles and criteria by which NGC will determine, at different times

---

<sup>85</sup> With effect from 1 September 2004 and following modifications made by the Secretary of State to the electricity transmission licence, what was formerly referred to as special condition AA4 of NGC's transmission licence became standard condition C16 of the electricity transmission licence.

<sup>86</sup> Standard condition C16 obliges NGC to have in place four documents in total; the Procurement Guidelines (PGs), the Balancing Principles Statement (BPS), the Balancing Services Adjustment Data (BSAD) Methodology Statement and the Applicable Balancing Services Volume Data (ABSVD) Methodology Statement. Details of the PGs, the BPS, the BSAD Methodology Statement and the ABSVD Methodology Statement can be found at NGC's website [www.nationalgrid.com/uk/indinfo](http://www.nationalgrid.com/uk/indinfo).



and in different circumstances, which balancing services it will use to assist in the operation of the transmission system.

### **Standard condition C16 reports and audit**

6.11 Standard condition C16 further requires ex-post reporting and an assessment of NGC's compliance in order to provide transparency in relation to NGC's actions. Standard condition C16 requires:

- ◆ NGC to prepare and publish annually a report in respect of the balancing services it has bought or acquired in the previous 12 months;
- ◆ NGC to prepare and publish annually a report on the manner in which, and the extent to which, it has complied with the BPS in the previous 12 months<sup>87</sup>; and
- ◆ NGC's auditors to prepare a statement to accompany the BPS review. In this statement, the auditors must provide their opinion as to the extent to which the licensee has complied with the BPS.

### ***Special condition AA5A***

6.12 Special condition AA5A sets restrictions on the revenues that NGC is allowed to earn as transmission licensee. For this purpose, NGC's activities are split between its Transmission Network Services (TNS) and its Balancing Services Activity (BSA).

6.13 The TNS activities are defined as including all NGC's authorised activities relating to the planning, development, construction and maintenance of the transmission system (except for its BSA and excluded services). The BSA covers procuring and using balancing services for the purpose of balancing the licensee's transmission system. As such, the TO carries out the TNS activities whilst the SO carries out the BSA activity.

---

<sup>87</sup> A six month report was prepared to cover the period between 1 April 2002 and 30 September 2002, however, future reports will cover a 12 month period and will be produced annually.

- 6.14 Part 1 of special condition AA5A outlines the revenue restriction in relation to NGC's TNS, while Part 2 outlines the revenue restriction in relation to its BSA.
- 6.15 The TNS revenue restriction is in the form of an RPI-X price control. The current restriction started on 1 April 2001 and is due to finish on 31 March 2006<sup>88</sup>. The BSA revenue restriction consists of a profit-sharing (sliding scale) incentive scheme, which has separate targets for NGC's internal and external SO costs.

## ***Industry Codes***

### ***Balancing and Settlement Code***

- 6.16 NGC is required under standard condition C3 of the transmission licence to prepare and comply with the Balancing and Settlement Code (BSC). The BSC came into effect on 14 August 2000. Ahead of BETTA go-live, a suite of modifications was made to the BSC to create a GB BSC as part of the introduction of BETTA. These changes were made by way of designation by the Secretary of State on 1 September 2004.
- 6.17 The scope of the BSC is defined in general terms in the transmission, generation and supply licences. The BSC is a code that sets out the rules for the Balancing Mechanism and imbalance settlement process in the wholesale electricity trading arrangements and it is maintained by NGC under standard condition C3 of its transmission licence.
- 6.18 The BSC sets down the arrangements in respect of:
- ◆ making, accepting and settling offers and bids to increase or decrease electricity delivered to, or taken off, the total system (NGC's transmission system and the distribution systems) to assist NGC in balancing the system; and
  - ◆ determining and settling imbalances and certain other costs associated with operating and balancing the transmission system.

---

<sup>88</sup> Details of the current revenue restriction can be found in 'The transmission price control review of the National Grid Company from 2001: transmission asset owner, Final proposals', Ofgem, September 2000.

- 6.19 A BSC Panel has been created and charged with overseeing the management, modification and implementation of the BSC rules, as specified in Section B of the BSC. The Panel has twelve representatives made up from industry members, consumer representatives, independent members and NGC. The Authority appoints the Chairman of the Panel.
- 6.20 The Balancing and Settlement Code Company (ELEXON<sup>89</sup>) supports the BSC Panel. The primary purpose of ELEXON is to provide or procure a range of operational and administrative services (both directly and through contracts with service providers) and to implement the provisions of the BSC and modifications to it.
- 6.21 The details of the modification procedures are contained in Section F of the BSC. They are designed to ensure that the process is as efficient as possible whilst enabling as many parties as possible to propose modifications and have the opportunity to comment on modification proposals. Whilst Ofgem can not initiate any modifications, it is required to approve or reject all modifications to the BSC, according to defined criteria outlined in standard condition C3(3) of NGC's transmission licence and its statutory duties. Ofgem's statutory duties are wider than the matters that the Panel must take into consideration and include amongst other things a duty to have regard to social and environmental guidance provided to Ofgem by the government.
- 6.22 NGC is required under the BSC to provide certain information to the market on an ex-ante basis. For example, NGC is required in accordance with Section Q.6 of the BSC to submit a number of data streams (e.g. the Indicated Margin and the National Indicated Imbalance) to the Balancing Mechanism Reporting Agent (BMRA) on an ex-ante basis. This data is made available for publication on the Balancing Reporting Mechanism Service (BMRS) to provide ex-ante information to market participants, enhancing transparency.

### ***Connection and Use of System Code***

- 6.23 NGC is required under standard condition C10 of the transmission licence to prepare the Connection and Use of System Code (CUSC). The CUSC is a

licence-based code, setting out the principal rights and obligations in relation to connection to and/or use of the transmission system and to the provision of certain balancing services. The CUSC was designated by the Secretary of State on 25 June 2001 and came into effect on 18 September 2001. Ahead of BETTA go-live, a suite of modifications was made to the CUSC to create a GB CUSC as part of the introduction of BETTA. These changes were made by way of designation by the Secretary of State on 1 September 2004.

6.24 A CUSC Panel has been charged with overseeing the CUSC amendment process as specified in Section 8 of the CUSC. The Panel has representatives made up from industry members, consumer representatives and NGC. The Chairman of the Panel is appointed by NGC and must be an executive director (or other senior employee) of NGC. NGC is responsible for implementing or supervising the implementation of Approved Amendments as outlined in paragraph 8.2.3.3 of the CUSC. As with the BSC, while Ofgem can not initiate amendments, it is required to approve or reject all amendments to the Code, according to defined criteria outlined in standard condition C10(18) of NGC's transmission licence and its statutory duties. Ofgem's statutory duties are wider than the matters that the Panel must take into consideration and include amongst other things a duty to have regard to social and environmental guidance provided to Ofgem by the government.

---

<sup>89</sup> The Balancing and Settlement Code Company was named ELEXON Limited on 7 June 2000.