ASSESSMENT REPORT for Modification Proposal P186

'Rationalising the criteria for the submission and redeclaration of Demand and Generation Capacities'

Prepared by: P186 Modification Group

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This document has been distributed in accordance with Section F2.1.10[1] of the Balancing and Settlement Code.

RECOMMENDATIONS

The P186 Modification Group invites the Panel to:

- **AGREE that the Alternative Modification P186 should be made;**
- **AGREE that the Proposed Modification P186 should not be made;**
- **AGREE a provisional Implementation Date for the Alternative Modification of 10 Working Days following an Authority decision;**
- **AGREE a provisional Implementation Date for the Proposed Modification (in the event that the Authority determines that the Proposed Modification should be made) of 10 Working Days following an Authority decision;**
- **AGREE that Modification Proposal P186 be submitted to the Report Phase; and**
- **AGREE that the draft Modification Report be issued for consultation and submitted to the Panel Meeting of 12 May 2005.**

[1] The current version of the Balancing and Settlement Code (the 'Code') can be found at http://www.elexon.co.uk/bscrelateddocs/BSC/default.aspx

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SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

As far as the P186 Modification Group has been able to assess, the following parties/documents would be impacted by the implementation of P186.

Parties		Sections of the BSC		Code Subsidiary Documents	
Suppliers	☒	A	☐	BSC Procedures	☐
Generators	☒	B	☐	Codes of Practice	☐
Licence Exemptable Generators	☒	C	☐	BSC Service Descriptions	☐
Transmission Company	☐	D	☐	Service Lines	☐
Interconnector	☒	E	☐	Data Catalogues	☐
Distribution System Operators	☐	F	☐	Communication Requirements Documents	☐
Non-Physical Traders	☐	G	☐	Reporting Catalogue	☐
Party Agents		H	☐	MIDS	☐
Data Aggregators	☐	I	☐	**Core Industry Documents**	
Data Collectors	☐	J	☐	Grid Code	☐
Meter Operator Agents	☐	K	☒	Supplemental Agreements	☐
ECVNA	☐	L	☐	Ancillary Services Agreements	☐
MVRNA	☐	M	☐	Master Registration Agreement	☐
BSC Agents		N	☐	Data Transfer Services Agreement	☐
SAA	☐	O	☐	British Grid Systems Agreement	☐
FAA	☐	P	☐	Use of Interconnector Agreement	☐
BMRA	☐	Q	☐	Settlement Agreement for Scotland	☐
ECVAA	☐	R	☐	Distribution Codes	☐
CDCA	☐	S	☐	Distribution Use of System Agreements	☐
TAA	☐	T	☐	Distribution Connection Agreements	☐
CRA	☐	U	☐	**BSCCo**	
Teleswitch Agent	☐	V	☐	Internal Working Procedures	☒
SVAA	☐	W	☐	**Other Documents**	
BSC Auditor	☐	X	☐	Transmission Licence	☐
Profile Administrator	☐			System Operator-Transmission Owner Code	☐
Certification Agent	☐				
MIDP	☐				
Other Agents					
SMRA	☐				
Data Transmission Provider	☐				

1 DESCRIPTION OF MODIFICATION PROPOSAL AND ASSESSMENT AGAINST THE APPLICABLE BSC OBJECTIVES

1.1 Modification Proposal

Modification Proposal P186 'Rationalising the criteria for the submission and redeclaration of Demand and Generation Capacities' (P186) was raised by Npower Ltd ('the Proposer') on 28 January 2005. P186 proposes that the criteria under which a BSC Party ('Party') must redeclare its previously-submitted Generation Capacity (GC) and/or Demand Capacity (DC) values should be revised, such that the existing absolute volume redeclaration threshold would be removed from the Code.

1.1.1 Background: Current Code criteria for GC/DC redeclarations

Section K3.4 of the Code requires Lead Parties to submit estimates of the most positive and most negative BM Unit Metered Volume (QM_{ij}) value for each individual BM Unit to the Central Registration Agent for each BSC Season. These are then divided by Settlement Period Duration (SPD) in order to respectively calculate the GC (a positive value) and DC (a negative value) of the BM Unit for that BSC Season. These GC and DC values are used to determine whether the BM Unit (and its Trading Unit) is classed as 'Production' (generation) or 'Consumption' (demand) – its 'P/C Status'[2] – and in the calculation of a Party's Credit Assessment Energy Indebtedness (CEI) and Credit Cover Percentage (CCP).[3]

K3.4.3 currently requires a Lead Party to redeclare its GC or DC estimate within a BSC Season if, for any Settlement Period:

a) The actual positive value of QM_{ij} / SPD exceeds GC; or

b) The actual negative value of QM_{ij} / SPD is less (more negative) than DC,

by an amount the magnitude of which is more than one or both of the following:

(i) 0.5MW; or

(ii) 1% of that capacity.

1.1.2 Issue identified by Modification Proposal

The Proposer of P186 argues that the current absolute volume redeclaration threshold discriminates against BM Units which have GC/DC values with a magnitude greater than 50MW. Since 1% of 50MW is 0.5MW, under the current criteria only those BM Units with a capacity of over 50MW may be required to redeclare GC/DC following a breach by less than 1%. In the view of the Proposer, Parties whose BM Units have GC/DC values greater than 50MW therefore have less margin for error in their Metered Volume estimates. This is illustrated in the table below:

Table 1 – Effective limit by BM Unit capacity (current Code provisions)

Declared GC/DC (magnitude)	<=50MW	>50MW
Effective limit under current provisions	**1%** (since 1% <=0.5MW)	**0.5MW** (since 1% >0.5MW)

[2] The Relevant Capacity of a BM Unit is GC if GC plus DC is positive and greater than zero. If GC plus DC is zero or negative, the Relevant Capacity of the BM Unit is DC. Similarly, the BM Units in a Trading Unit are classed as Production BM Units if the sum of their Relevant Capacities is positive and greater than zero. If the sum of the Relevant Capacities is zero or negative, all BM Units in the Trading Unit are classed as Consumption BM Units.

[3] An explanation of the role of GC and DC in the CEI calculation is provided in Annex 6.

The Proposer argues that the average forecast error for BM Units with large Metered Volumes is typically greater than 0.5MW. The Proposer therefore believes that the current absolute redeclaration threshold is unnecessarily onerous for Parties whose BM Units have a capacity of more than 50MW, since it requires them to frequently redeclare GC/DC values as a result of minor percentage breaches. The Proposer suggests that the current Code criteria may therefore lead such Parties to intentionally overstate their Metered Volume estimates (i.e. make GC more positive and DC more negative) to avoid frequent redeclarations, and that this in turn may lead to the overprovision of Credit Cover.

The Proposer also argues that the absolute volume redeclaration threshold places an unnecessary administrative burden on BSCCo in enforcing redeclarations for minor percentage breaches. BSCCo currently undertakes an automated fortnightly comparison of Parties' declared GC/DC and actual BM Unit Metered Volumes, in order to identify Parties with breaches in excess of the Code thresholds. These Parties are then manually requested by BSCCo to redeclare their values. Where a Party continually fails to comply with redeclaration requests this may lead to it being placed in Default under Section H3.1.1(d) of the Code.

1.1.3 Solution proposed by Modification Proposal

P186 proposes to remove the 0.5MW absolute volume breach limit from the Code, such that Parties would only be required to redeclare their GC/DC following a breach by more than 1%.

The Proposer argues that a uniform 1% limit would treat all BM Units proportionally, and would therefore remove an existing discrimination against Parties with GC/DCs over 50MW. The Proposer suggests that this would avoid the need for such Parties to overestimate their BM Unit Metered Volumes, and thereby reduce the level of unnecessary Credit Cover held under the Code. The Proposer believes that this would better facilitate the achievement of Applicable BSC Objective (c):

> 'Promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity'.

The Proposer also argues that the removal of the absolute volume threshold would reduce administrative effort for Parties (in forecasting, submitting and redeclaring GC and DC values) and for BSCCo (in monitoring breaches and enforcing redeclaration). The Proposer believes that this would better facilitate the achievement of Applicable BSC Objective (d):

> 'Promoting efficiency in the implementation and administration of the balancing and settlement arrangements'.

1.2 Process followed to date

The P186 Initial Written Assessment (IWA, Reference 1) was presented to the BSC Panel ('the Panel') on 10 February 2005, where the Panel determined that P186 should be submitted to a two-month Assessment Procedure by a new Modification Group formed from members of the Settlement Standing Modification Group. The issues raised by BSCCo and the Panel during the IWA formed the basis of the Modification Group's Terms of Reference for P186, and can be found in Annex 2 along with details of the Group's membership.

During the two-month Assessment Procedure the P186 Modification Group ('the Group') held two meetings (on 22 February and 23 March 2005), and developed an Alternative Modification which is detailed in Sections 1.7-1.10. The Group also issued an industry consultation (on 7 March 2005, Reference 2) and commissioned impact assessments from BSCCo and the Transmission Company. Summaries of the responses received can be found in Sections 4-7, whilst full copies of the responses are included as Annexes 3 and 4.

Draft legal text for the Proposed and Alternative Modifications has been provided, and is included as Annex 1. The Modification Group has reviewed this text and agreed that it delivers the solution developed by the Group.

1.3 Proposed Modification

Under the Proposed Modification, the current 0.5MW absolute volume redeclaration threshold would be removed from the Code.

A Lead Party would therefore only be required to redeclare its GC or DC estimate within a BSC Season if, for any Settlement Period:

a) The actual positive value of QM_{ij} / SPD exceeded GC; or

b) The actual negative value of QM_{ij} / SPD was less (more negative) than DC,

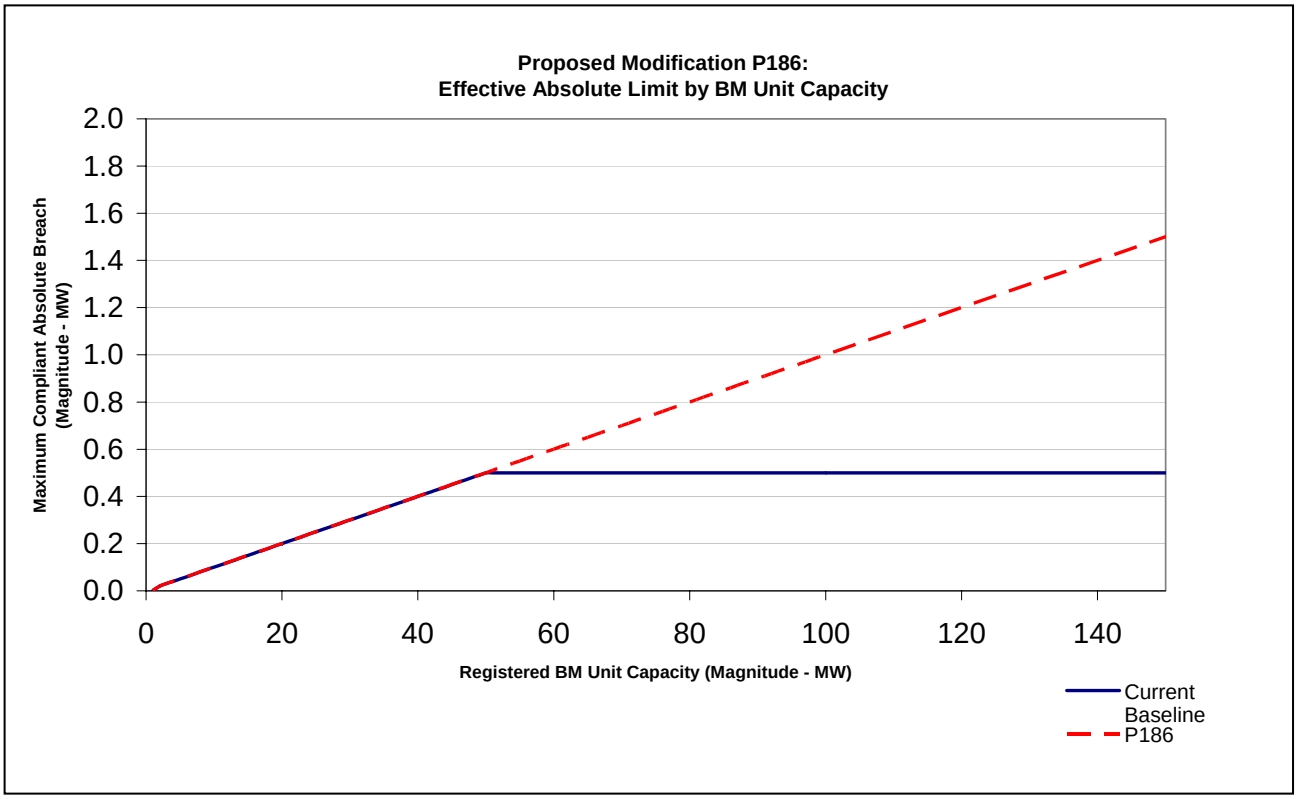
by an amount the magnitude of which was more than 1% of that capacity.

The Proposed Modification would have no impact on the degree of absolute accuracy required for BM Units with a capacity of 50MW or less, since the effective limit for breaches by these BM Units is already 1% (see Section 1.1.2 above). However, for BM Units with a capacity greater than 50MW the Proposed Modification would introduce an absolute margin for error that increased in proportion to the size of the BM Unit. This is illustrated in the table and graph below.

Table 2 – Effective limit by BM Unit capacity (Proposed Modification P186)

Declared GC/DC (magnitude)	<=50MW	>50MW
Effective limit under Proposed Modification P186	**1%** (<=0.5MW)	**1%** (>0.5MW)

Figure 1 – Current effective absolute limit compared with Proposed Modification P186



1.4 Issues raised by the Proposed Modification

This section outlines the discussions of the Modification Group regarding the following issues raised by the Proposed Modification:

- The potential interaction between P186 and Transmission Company processes under the industry codes;
- The materiality of the issue identified by P186;
- The respective merits of an absolute volume or relative percentage measure of accuracy in GC/DC submissions; and
- The impact of the current GC/DC redeclaration criteria on Credit Cover arrangements under the Code.

A summary of the Group's views regarding the cost-benefits of the Proposed Modification and its merits against the Applicable BSC Objectives can be found in Sections 1.5 and 1.6.

1.4.1 Interaction with Transmission Company processes

The Modification Group noted that all GC/DC breaches are notified to the Transmission Company by BSCCo in accordance with Section K3.4.7 of the Code. This section of the Code also allows the Transmission Company (via the Panel) to request that a Lead Party justifies or redeclares its prevailing GC/DC estimate in circumstances where the Transmission Company has reason to believe that this estimate may be inaccurate.

The Group additionally noted that the GC/DC breaches identified by BSCCo may be useful to the Transmission Company in carrying out processes under other industry codes. For example, GC/DC breaches are used by the Transmission Company as part of its monitoring of the Connection Entry Capability (CEC) of BM Units under the Connection and Use of System Code (CUSC) – although there is no dependency between these processes within the BSC or CUSC, and GC/DC and CEC are not related values.

The Modification Group therefore agreed that the Transmission Company impact assessment should seek to confirm that the proposed relaxation of the BSC GC/DC redeclaration thresholds under P186 would not adversely impact Transmission Company processes. In its response, the Transmission Company confirmed that it would not be impacted by P186 (see Section 7).

1.4.2 Materiality of issue identified by Modification Proposal

The two pie charts on the following page show BSCCo's analysis of the frequency with which the issue identified by the Modification Proposal occurred over a sample fortnight (4-18 January 2005) within the 2005 BSC Winter season. Since declared GC/DC values are compared with the most positive/negative Metered Volume for a BM Unit during a season, the analysis shows those breaches since the start of the BSC Winter season which had not been redeclared (and therefore not necessarily just those which occurred during the fortnight).

During this sample BSC Winter fortnight, 100 BM Units were in breach of their declared DC whilst 14 BM Units were in breach of their declared GC. 3% of these DC breaches and 21% of GC breaches fell into the category of breach which would be removed by the Proposed Modification (i.e. were breaches of the 0.5MW threshold but not the 1%). Overall, 5% of the total 114 breaches of GC and DC would therefore have been removed under the Proposed Modification.

BSCCo has compared these findings with analysis of another sample fortnight (8-19 July 2004) taken from the 2004 BSC Summer season, which confirms that they are representative of GC/DC breaches as

a whole. During this sample BSC Summer fortnight, 3% of a total 77 breaches of GC and DC would have been removed under the Proposed Modification.

The estimated reduction in GC/DC breaches under the Proposed Modification is therefore estimated to be in the order of 3-5%.

Figure 2 – Estimated proportion of DC breaches removed under Proposed Modification P186

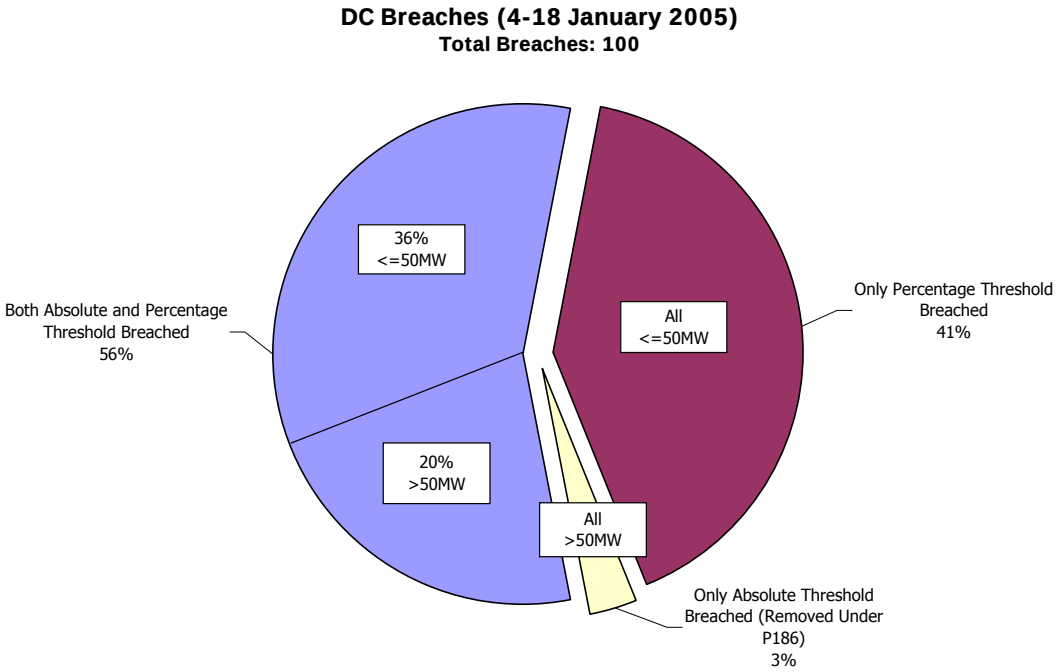
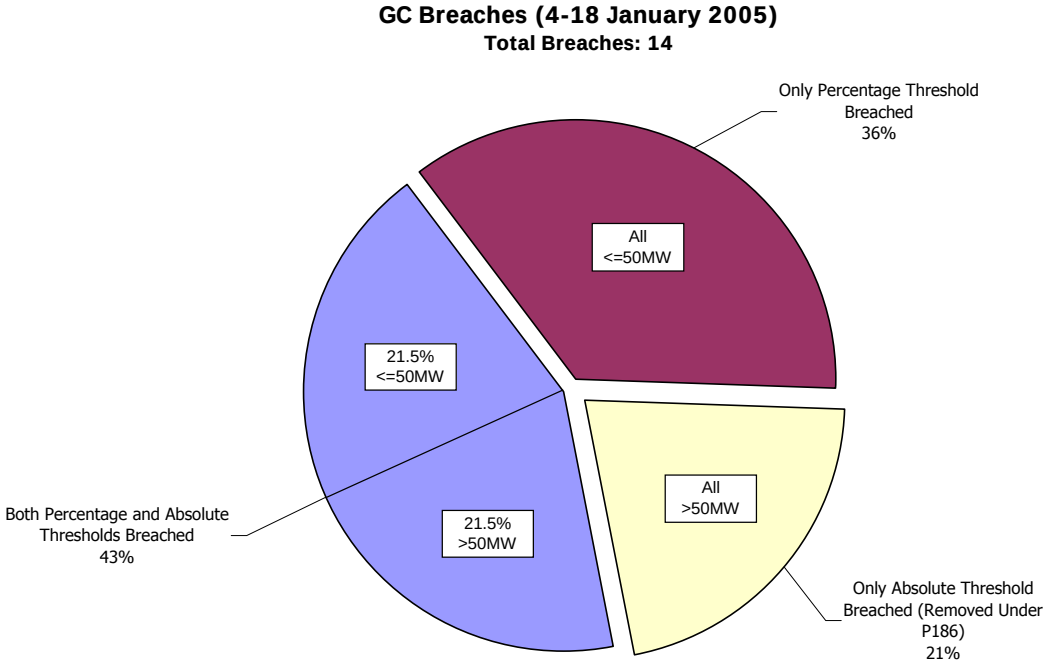


Figure 3 – Estimated proportion of GC breaches removed under Proposed Modification P186



The Modification Group also noted the following key statistics relating to the sample BSC Winter fortnight:

- There were only a small number of GC breaches compared with breaches of DC;
- 57% of GC breaches and 77% of DC breaches were by 'small' BM Units with a declared capacity of 0-50MW;
- 36% of GC breaches and 41% of DC breaches were by less than 0.5MW, but breached the 1% redeclaration threshold due to the small capacity of the BM Units concerned;
- 21.5% of GC breaches and 6% of DC breaches resulted from breaches of a declared zero value by less than 0.5MW (creating an infinitely high percentage breach);
- Approximately 50% of breaches of the GC and DC absolute volume thresholds were by 0.5-2MW; and
- There were higher-materiality breaches of GC than of DC (22% of GC volume breaches were of more than 10MW compared with 5% of DC – the highest GC and DC volume breaches were by 68MW and 16.5MW respectively).

The Proposer's Representative suggested that the low number of BM Units breaching only the absolute threshold lends support to their belief that many Parties are intentionally overestimating their DC in order to avoid redeclaration. However, after considering the analysis provided by BSCCo, the Proposer's Representative concluded that they had not appreciated the amount of low capacity breaches which occur during a BSC Season (i.e. breaches of a zero capacity or small absolute breaches of capacities less than 50MW). The Modification Group noted that there were a large number of non-material GC/DC breaches by small BM Units for which the Proposed Modification would not remove the requirement to redeclare, since although under 0.5MW they represented more than 1% of declared capacity.

Moreover, the Group considered that the analysis demonstrated that for BM Units over 50MW the 1% redeclaration threshold is also an issue since the majority of breaches by these BM Units were of more than both 0.5MW and 1%. The Proposer's Representative stated their belief that the average forecast error for a Consumption BM Unit is around 2%, and noted that 20% of DC breaches by BM Units over 50MW were by 1-2%. The other members of the Group were sympathetic to this view, and the Group's discussion of this issue is outlined below.

1.4.3 Merits of absolute accuracy versus relative accuracy

The Modification Group agreed that the current Code thresholds are administratively inefficient in that they require the monitoring and redeclaration of breaches which are not material in absolute terms. Although the majority of members agreed that the Proposed Modification would deliver a reduction in the number of GC/DC breaches, the Group considered that removing the absolute accuracy requirement from the Code would not address the following categories of breach:

- **Low-materiality breaches of a declared zero value**.

  These would continue to create infinitely high percentage breaches and therefore to require redeclaration (e.g. a 0.001MW breach of a zero capacity would represent a breach of >100%). Scenarios where such breaches could occur include the tripping of a generating plant which had declared a DC value of zero. This would result in station load appearing as a negative Metered Volume.

- **Low-materiality breaches of a small capacity.**

  These would continue to create disproportionately high percentage breaches and to require redeclaration (e.g. a 0.1MW breach of a 0.5MW capacity would represent a breach of 20%).

- **Breaches of less than 1% but of large absolute materiality.**

  Although a uniform 1% limit would be proportionate to the size of the BM Unit it would be uncapped. The largest GC estimate registered for a BM Unit as of 31 January 2005 was 2,000MW (of which 1% would be 20MW), whilst the largest DC estimate was approximately -3,000MW (where 1% would be -30MW). It would therefore be possible for a large-capacity BM Unit to breach its declared GC or DC by a large absolute amount without triggering the 1% redeclaration requirement.

In addition, the Group considered that a 1% threshold might still be too narrow an error-margin for Consumption BM Units and that a 2% limit would be more reflective of the average DC forecast error.

The Group therefore considered that introducing a uniform redeclaration threshold of 1% under the Proposed Modification might still result in frequent redeclarations for BM Units both under and over 50MW, and might continue to incentivise some BM Units to overestimate their Metered Volumes. Despite this, the majority of Modification Group members agreed that the Proposed Modification would still be better than the current Code thresholds, which these members believed to require an unrealistic and onerous level of accuracy in GC/DC estimations.

However, the Modification Group (including the Proposer's Representative) agreed that there may also be merit in retaining a combination of absolute and percentage thresholds, but relaxing one or both of these thresholds in order to require only 'material' breaches to be redeclared. This solution was subsequently developed by the Group as an Alternative Modification, and more detail can be found in Sections 1.7-1.10 below.

One member of the Group also stated that they would be more comfortable with a relaxation of the absolute accuracy requirement, rather than its complete removal from the Code, due to the potential impact on the provision of Credit Cover (see below).

1.4.4 Impact of current criteria on Credit Cover arrangements

The Modification Group agreed that DC (which is dependent on a customer base which may change during a season) is more difficult to accurately estimate than GC (which is based on physical plant capacity). The Group noted the suggestion of the Modification Proposal that the current 0.5MW threshold therefore leads Parties to overestimate DC in order to avoid redeclaration, and that this in turns leads to overprovision of Credit Cover through overestimation of Parties' Energy Indebtedness. The Group noted that, following implementation of Approved Modification P140 on 23 February 2005, GC and DC are now only used in the CEI calculation for non-Interconnector BM Units – and therefore that the GC/DC redeclaration thresholds have no impact on the Credit Cover of Interconnector BM Units.[4]

a) Modification Group initial view

The Modification Group agreed that its consideration of what constitutes a 'material' breach of GC/DC, and whether the current redeclaration thresholds should be relaxed, would depend on the point at which the maximum allowed breach could lead to a significant underestimation of a Party's Energy Indebtedness and thereby create a risk to other Parties in the market. The initial view of the majority of Modification Group members (including the Proposer's Representative) was that relaxation of the

[4] Modification Proposal P140 'Revised Credit Cover methodology for Interconnector BM Units'. The CEI calculation for Interconnector BM Units is now based on Period FPN rather than GC/DC.

current thresholds would be unlikely to have a material impact on the provision of Credit Cover. These members considered that GC/DC values represent only a small fraction of the CEI calculation – which contains other inherent inaccuracies besides the potential inaccuracy of GC/DC, and is an estimated rather than an actual liability.

One member of the Group was broadly supportive of this view, and noted that a relaxation in the Code's requirements for GC/DC accuracy might not necessarily lead to a reduction in the Credit Cover lodged by Parties. This member argued that many Parties may intentionally choose to lodge excess Credit Cover for reasons which are unrelated to GC/DC (e.g. in order to remove the need to actively monitor their credit position), although recognising that small Parties may not have the resources to lodge such 'precautionary' amounts.[5] However, this member considered that the Proposed Modification would create the *potential* for a reduction in Credit Cover, and stated that they were therefore uncomfortable with creating an uncapped percentage margin for error which could result in material inaccuracies by large BM Units.

In order to support its initial view, the Modification Group requested that BSCCo undertake analysis of:

- The extent to which the GC/DC estimates submitted at the beginning of a BSC Season differ from the actual most positive and negative BM Unit Metered Volumes during the season (to assess whether GC and DC are consistently over- or under-estimated); and
- The extent to which a relaxation in the redeclaration thresholds could lead to an underestimation of a Party's CEI.

This analysis is provided below.

b) Analysis of variation between GC/DC estimates and actual Metered Volumes

The Modification Group noted that the larger (more positive) the GC value is declared for a BM Unit, the 'longer' the BM Unit appears in the CEI calculation and the less Energy Indebtedness it accrues. Similarly, the more negative the declared DC value, the 'shorter' it appears and the more Energy Indebtedness it accrues. Only relaxation of the DC redeclaration requirement could therefore result in the potential underprovision of Credit Cover.

The Modification Group agreed that there is an existing incentive on Parties to overestimate their GC and submit the least-negative DC possible, in order to avoid an overestimation of their Energy Indebtedness. The Group agreed that this appears to be part of the explanation for the small number of GC breaches compared with DC (see Section 1.4.2).

The Modification Group noted the results of BSCCo's comparison of the pre-season capacity estimates[6] and actual Metered Volumes of BM Units during the 2004 BSC Autumn season, as shown in the graphs on the following page. The results appear to support the argument of the Modification Group that there is an incentive for Generators to over-estimate GC for Production BM Units, whilst Suppliers are incentivised to submit the least-negative DC possible for Consumption BM Units (resulting in more under-estimations of actual Metered Volumes).

NB: The apparent 'under-estimation' of DC by Production BM Units can largely be explained by small absolute breaches of a declared zero capacity by Generators, due to factors like station load. Similarly, Consumption BM Units are likely to have a zero GC – explaining the high percentage of Consumption BM Units which accurately estimated their GC for the season.

[5] Although Parties are required to lodge a minimum amount of Credit Cover in order to cover their estimated indebtedness there is no upper limit, and individual Parties may therefore choose to lodge as much additional 'excess' Credit Cover as they wish.
[6] Note that the analysis intentionally does not take account of any redeclarations of GC/DC during the season.

Figure 4 – Comparison of Production BM Units' GC/DC with actual Metered Volumes

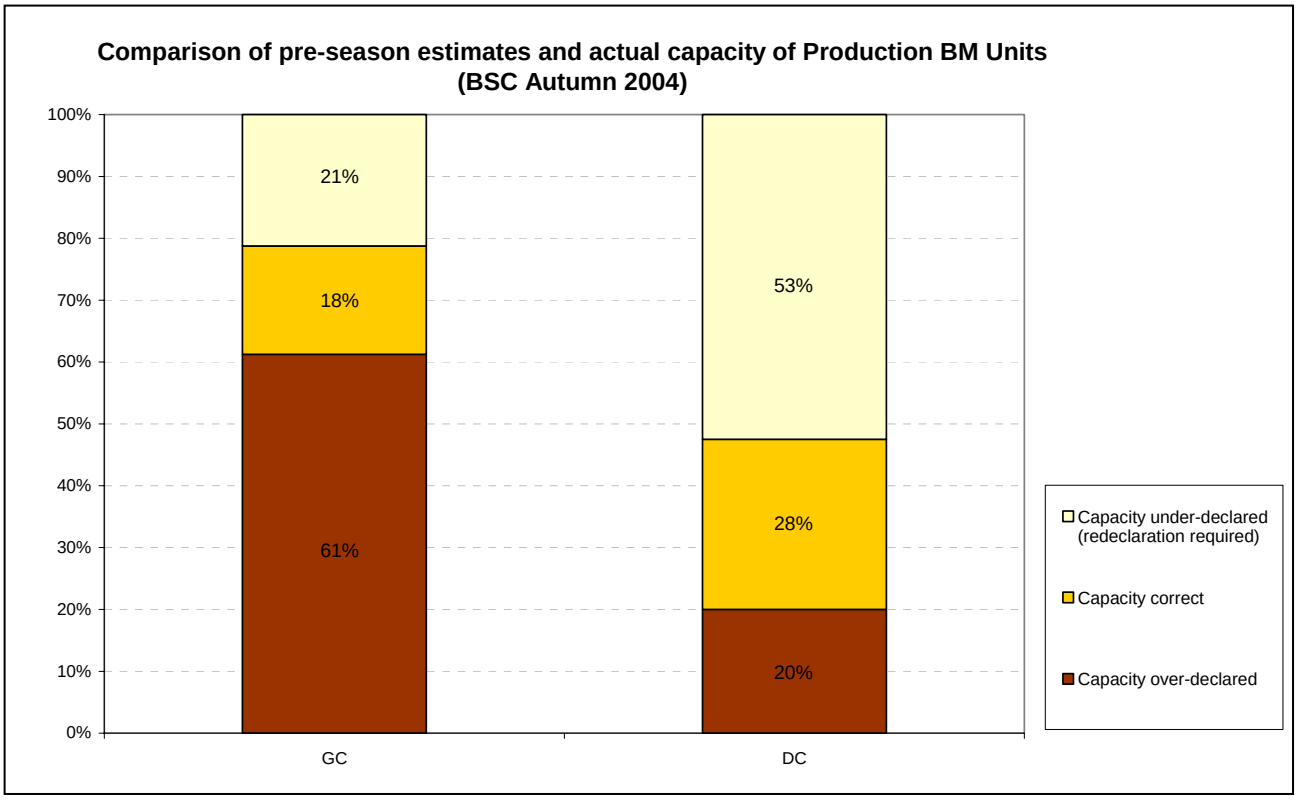
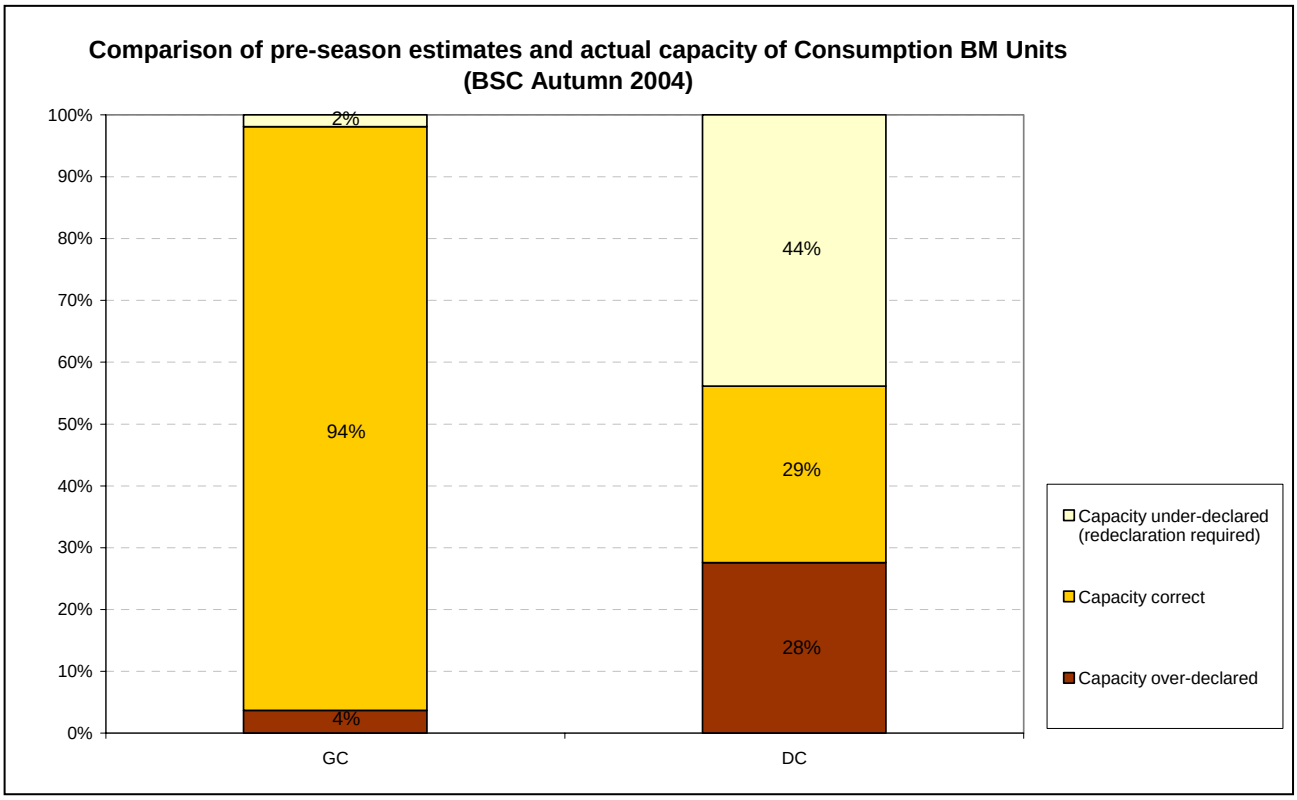


Figure 5 – Comparison of Consumption BM Units' GC/DC with actual Metered Volumes



The results of the analysis therefore do not appear to support the argument of the Modification Proposal that Parties are overestimating DC in order to avoid redeclaration. This is consistent with the information provided by the majority of respondents to the Assessment Consultation (see Section 6).

c) Analysis of impact of GC/DC accuracy on the CEI calculation

(i) Existing sources of error in the CEI calculation

The analysis provided by BSCCo below considers sources of error in the CEI calculation in order to understand the potential impact of any relaxation in GC/DC accuracy.

The current CEI calculation uses a combination of a seasonal average Credit Assessment Load Factor (CALF) and the Relevant Capacity (either GC or DC) in order to estimate the Metered Volume of a non-Interconnector BM Unit. This value is then used to estimate Credited Energy Volumes for an Energy Account, which is subsequently compared to the Energy Account's actual contractual position to indicate its likely imbalance volume. This approach is used, on average, for 8 of the 29 days to which the Credit Cover calculation applies. A more detailed explanation of the calculation is provided in Annex 6.

Two factors could affect the extent to which the combination of CALF and the Relevant Capacity accurately reflects the actual average Metered Volume over the 8-day window. These are as follows:

- Since CALF is a seasonal average value, CALF multiplied by Relevant Capacity (GC or DC) is not a precise representation of actual Metered Volume in either an individual Settlement Period or over the 8-day window for which the calculation is applied (even if CALF and GC/DC are known to 100% accuracy). As a consequence, the accuracy to which the CEI calculation estimates actual Trading Charges is influenced by the use of CALF and GC/DC as a proxy for actual Metered Volume. If GC/DC and CALF are precisely known, the extent to which the average Metered Volume in the 8-day window is aligned with the seasonal average will determine the accuracy of the estimated Metered Volume. This error is inherent to the CEI calculation – i.e. it exists even if all the values being used are known to 100% accuracy.
- If the average Metered Volume in the 8-day window is aligned with the seasonal average, the accuracy of CALF and GC/DC will determine the accuracy of the estimated Metered Volume. This error is not inherent in the CEI calculation and is introduced due to imperfect knowledge of the Relevant Capacity value and CALF. As the CALF value is generally based on data from the previous year there is a significant possibility that it will differ from the actual load factor for the season.

By removing any contribution of GC/DC and CALF inaccuracies and estimating the inherent error within the CEI calculation, it is possible to illustrate the fundamental accuracy limitations of CEI. If it is shown that these fundamental limitations significantly exceed the current GC/DC redeclaration thresholds, this would provide support for the proposed relaxation of GC/DC accuracy under P186.

(ii) Explanation of analysis

The following process has been used in order to understand the extent to which accuracy of CALF and GC/DC values impacts the accuracy of the CEI calculation:

- A random sample of 6 Production and Consumption BM Units was selected. This sample included small (capacity <50MW), medium (capacity ~500MW), and large (capacity >1000MW) BM Units.
- A window of 8 Settlement Days (21-28 March 2004) was chosen at random and the average actual Metered Volume calculated over the period for each BM Unit.
- Actual Metered Volumes for the entire BSC Season were queried for each BM Unit to establish theoretically correct GC/DC and CALF values. This approach is intended to remove any distortion associated with erroneous GC/DC estimates or CALF values.

- The percentage difference between the average Metered Volume over the 8-day window and the estimated average Metered Volume derived from the theoretical CALF and GC/DC was calculated. This value is taken as an indication of the inherent inaccuracy of using CALF and GC/DC to estimate the Metered Volume over the time period considered. These results are included in the table below.
- The absolute amount by which the theoretically-correct GC/DC would need to change to produce the same deviation between the estimated and actual Metered Volume was calculated (as a MW value). This value is considered to give an indication of the absolute error in Relevant Capacity which would be needed to result in an inaccuracy equivalent to that inherent in the CEI calculation. These results are also included in the table.
- The current effective absolute redeclaration threshold for each BM Unit in the sample was calculated using the existing 0.5MW and 1% limits, and is also included. Please note that for BM Units with a capacity above 50MW this will reflect the 0.5MW limit. For small BM Units under 50MW, this will reflect the 1% limit – e.g. a BM Unit of 20MW will have an effective absolute limit of 0.2MW.

(iii) Results

Table 3 – Inherent error in CEI calculation shown as equivalent GC/DC error

Example BM Unit	Inherent error (% - magnitude)	Equivalent absolute GC/DC error (MW - magnitude)	Current effective absolute GC/DC limit (MW - magnitude)
Large Consumption	12%	377 MW	0.5 MW
Medium Consumption	5%	22 MW	0.5 MW
Small Consumption	77%	14 MW	0.2 MW
Small Production	0.3%	0.07 MW	0.4 MW
Medium Production	3%	14 MW	0.5 MW
Large Production	17%	205 MW	0.5 MW

In the majority of cases the inherent error is higher than the current GC/DC redeclaration thresholds (both in absolute and percentage terms). In addition, the inherent error increases, in absolute terms, with BM Unit capacity (whereas the current absolute GC/DC redeclaration threshold is constant for BM Units with a capacity greater than 50MW).

(iv) Conclusions

It is considered that the following conclusions can be drawn from this analysis:

- The inherent error in the CEI calculation is the limiting factor, rather than the accuracy of GC/DC. This supports the proposed relaxation of the current GC/DC accuracy thresholds.
- In absolute terms, the inherent error in the CEI calculation increases with BM Unit capacity. This supports a move to a percentage threshold under P186.

It should be noted that the Group focused on the inherent error in the CEI calculation. There is an additional error introduced in the calculation of a Party's Credit Cover Percentage by the use of a Credit Assessment Price (CAP) to approximate the charge that would be incurred by these estimated imbalances. Any difference between CAP and the actual imbalance charge applied for a particular

Settlement Period will increase the error in the credit calculation. This error has not been included in the analysis.

d) Modification Group conclusions

The majority of Modification Group members considered that the analysis provided by BSCCo supported their view that the proposed relaxation of the GC/DC redeclaration requirements would not materially impact the provision of Credit Cover under the Code, and would therefore pose no increased risk to the rest of the market. These members noted that GC and DC values are only used for an 8-day window in the CEI calculation, and believed that there was already a tendency for Parties to over-provide Credit Cover in order to avoid actively monitoring their credit position. One member noted that, by the time actual Metered Volume data for a BM Unit confirmed whether or not its GC/DC estimates required redeclaration, its estimated values would already have been used in the 8-day window of the calculation. This member therefore considered that altering the redeclaration thresholds would have little impact on the amount of Credit Cover provided by Parties.

However, one member remained concerned that an uncapped percentage error margin could give rise to material inaccuracies in the GC/DC values of large BM Units, and that this could result in an underestimation of their Energy Indebtedness.

1.5 Modification Group's cost-benefit analysis of the Proposed Modification

1.5.1 Costs and benefits to BSCCo

The Modification Group noted BSCCo's existing process for monitoring and enforcing redeclaration of GC/DC breaches, as shown in the process diagram included as Annex 5. The Group noted that under the Proposed Modification this process would remain the same, but that there would be an estimated 3-5% reduction in the number of BM Units in breach in any given fortnight – and therefore a corresponding reduction in the number of times the enforcement process was triggered (see Section 1.4.2). The Modification Group noted BSCCo's estimate that it currently spends around 39 man days per year chasing GC/DC breaches under the existing Code baseline, and that the estimated 3-5% reduction in breaches under the Proposed Modification would therefore result in an annual saving of 1-2 man days' effort.

The Modification Group noted that the implementation costs of the Proposed Modification were of a low magnitude (see Section 2), since only minor changes would be required to the Code and to the automated query used by BSCCo to compare declared GC/DC values with actual Metered Volumes (see Sections 4-5).

1.5.2 Costs and benefits to Parties

The Modification Group agreed that the main benefit of the Proposed Modification for Parties lay in the administrative savings which could result from the relaxation of the GC/DC redeclaration thresholds, through the potential removal of the need for large BM Units to redeclare GC/DC values following minor volume breaches. The Group noted the estimated 3-5% reduction in the number of BM Units in breach during any given fortnight, and that respondents to the Assessment Consultation estimated an average effort of 2 man hours for each GC/DC redeclaration (see Section 6). The Group considered that the Proposed Modification would therefore offer scope for minor efficiency savings to Parties, noting the view of some consultation respondents that it could reduce the 'hassle' involved in redeclaring GC/DC values.

The Modification Group noted that the beneficiaries of the administrative savings would be BM Units with a capacity greater than 50MW – specifically, large Consumption BM Units with DC breaches of a

magnitude of less than 1%. The Group noted that the MW materiality of the threshold relaxation would be 1% of a BM Unit's capacity, and could range up to a magnitude of 30MW (using the current largest BM Unit declared capacity).

The Modification Group noted that the Proposed Modification would have a neutral impact on BM Units with a capacity less than 50MW, since their current effective breach limit is already 1%.

The majority of Modification Group members considered that there would be no negative impact to Parties as a result of the Proposed Modification, since relaxing GC/DC accuracy would not materially impact the provision of Credit Cover under the Code.

1.5.3 Summary of cost-benefit analysis

The majority of Modification Group members agreed that the Proposed Modification would deliver efficiency savings to BSCCo and Parties, whilst not adversely impacting Credit Cover. These members noted that such benefits would be limited – since the Proposed Modification would not address minor volume breaches by BM Units under 50MW, or necessarily reflect the average forecast error for BM Units over 50MW. However, on balance, these members agreed that the Proposed Modification would still better facilitate the Applicable BSC Objectives than the current Code baseline – since it would require a more realistic and less onerous level of GC/DC accuracy than the existing thresholds.

However, one member of the Group argued that there was no guarantee that the potential efficiency savings of the Proposed Modification would be realised in practice. This member argued that, given the incentive for Parties to declare a DC which is the least negative possible, there could still be a tendency to push the 1% tolerance – and that the number of DC breaches might therefore stay the same.

This member also remained concerned that an uncapped percentage error margin could give rise to material inaccuracies in the GC/DC values of large BM Units, and that these could result in an underprovision of Credit Cover.

1.6 Assessment of whether the Proposed Modification would better facilitate the Applicable BSC Objectives

In summary, the majority view of the Modification Group was that the Proposed Modification would better facilitate the achievement of Applicable BSC Objectives (c) and (d) than the current Code baseline.

1.6.1 Applicable BSC Objective (c)

The majority of Modification Group members believed that the Proposed Modification would deliver cost and efficiency savings to Parties through a reduction in the number of GC and DC breaches. Although these savings would be limited to BM Units over 50MW with breaches by less than 1%, these members considered that the Proposed Modification would still better facilitate competition and Applicable BSC Objective (c) than the current Code baseline since it would provide more realistic and less onerous redeclaration requirements. One member disagreed, arguing that a relaxation in the GC/DC redeclaration requirements would not necessarily lead to a reduction in the number of breaches since there would continue to be an incentive for Parties to push the 1% DC tolerance to avoid an overestimation of their Energy Indebtedness.

The majority of Modification Group members agreed that removal of the 0.5MW absolute limit would have a neutral effect on the provision of Credit Cover under the Code, and that the Proposed Modification would therefore pose no increased risk to the rest of the market or to competition. One member disagreed and argued that, although the Proposed Modification would not necessarily lead to a reduction in Credit Cover provision, it had the potential to do so. This member remained concerned that an uncapped 1% percentage error margin could give rise to material inaccuracies in the GC/DC

values of large BM Units, and that these could result in the underestimation of their Energy Indebtedness. This member believed that this would be detrimental to competition and Applicable BSC Objective (c). This member stated that they therefore did not believe that the Proposed Modification would better facilitate the Applicable BSC Objectives when compared with the current Code baseline – and considered that they would be more comfortable with the relaxation of the existing 0.5MW threshold rather than the total removal of an absolute threshold from the Code.

1.6.2 Applicable BSC Objective (d)

The majority of Modification Group members believed that the Proposed Modification would also deliver cost and efficiency savings to BSCCo through a reduction in the number of breaches for which it would be required to enforce redeclaration. These members considered that the Proposed Modification would therefore better facilitate efficiency in the balancing and settlement arrangements and Applicable BSC Objective (d).

One member disagreed and argued that a relaxation in the GC/DC redeclaration requirements would not necessarily lead to a reduction in breaches, due to the incentive on Parties to push whatever DC tolerance was set.

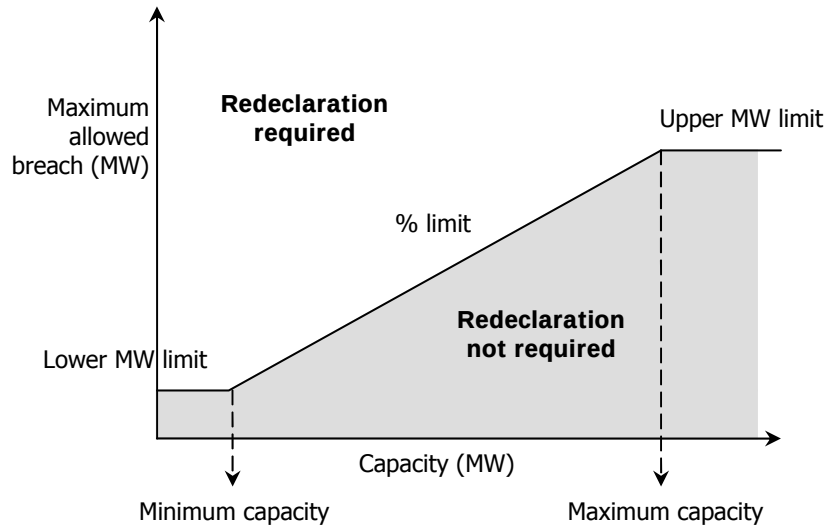
1.6.3 Preference for Alternative Modification

Although the majority of Modification Group members believed that the Proposed Modification would better facilitate the achievement of the Applicable BSC Objectives than the current Code baseline, the limitation of its benefits and the concerns of one member regarding Credit Cover led the Group to develop an Alternative Modification. The unanimous view of the Modification Group was that this Alternative, detailed in Sections 1.7-1.10 below, would better facilitate the achievement of the Applicable BSC Objectives when compared with both the Proposed Modification and the current Code baseline.

1.7 Alternative Modification

Under the Alternative Modification developed by the Modification Group, the existing 0.5MW absolute volume redeclaration threshold would still be removed from the Code and a percentage threshold applied – but only for BM Units whose declared GC/DC values were above a set minimum ('de minimis') capacity and below a set maximum capacity. For those BM Units under the minimum or above the maximum capacity, an absolute MW limit and not a percentage limit would be applied (shown in the diagram below).

Figure 6 – Alternative Modification redeclaration thresholds



The lower and upper MW limits are derived from applying the percentage limit to the minimum and maximum capacities. The percentage threshold chosen by the Modification Group is 2%, to be applied to BM Units between a minimum 100MW and maximum 500MW capacity. This therefore gives upper absolute limits of 2MW and 10MW respectively as shown in the table below.

Table 4 – Effective limit by BM Unit capacity (Alternative Modification P186)

Declared GC/DC (magnitude)	<=100MW	>100MW but <=500MW	>500MW
Effective limit under Alternative Modification P186	**2MW limit**	**2% limit**	**10MW limit**

Under the Alternative Modification, a Lead Party would therefore be required to redeclare its GC or DC estimate within a BSC Season if, for any Settlement Period:

a) The actual positive value of QM_{ij} / SPD exceeded GC; or

b) The actual negative value of QM_{ij} / SPD was less (more negative) than DC,

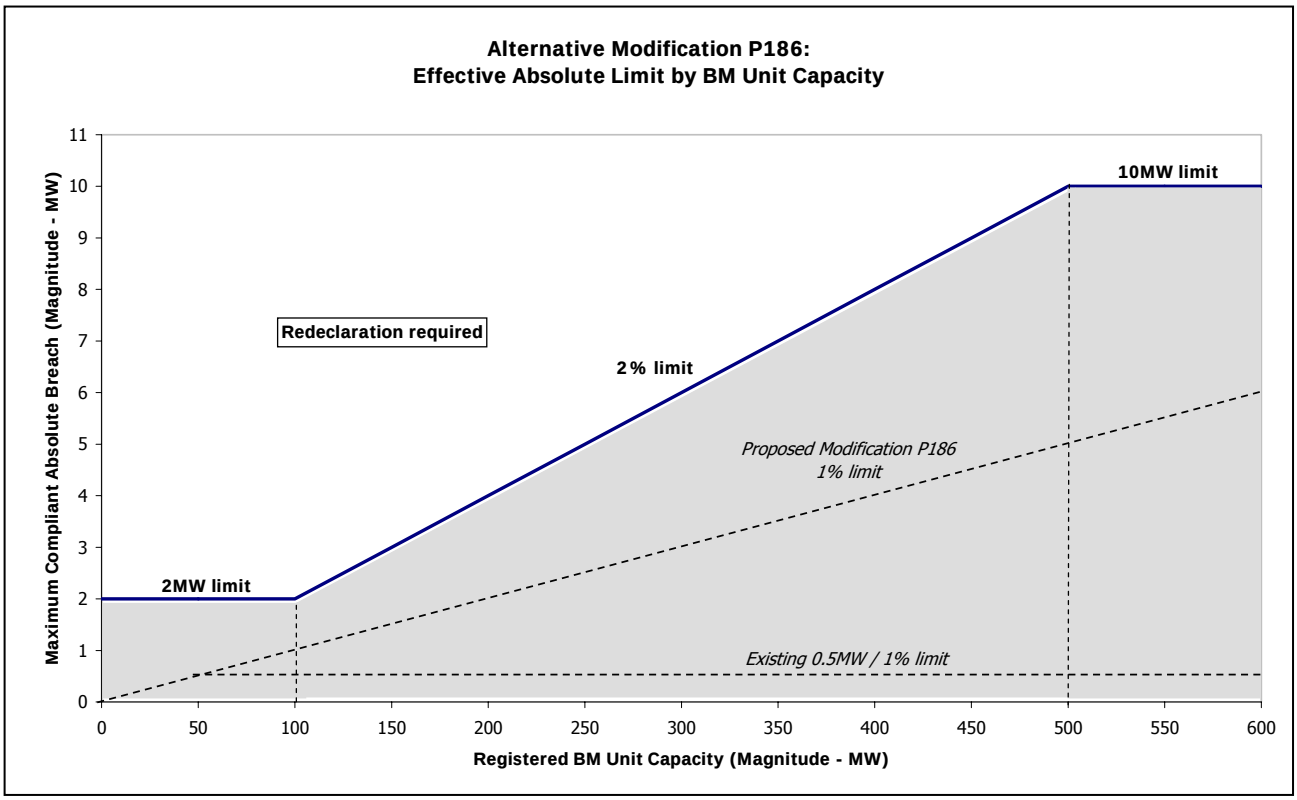
by an amount the magnitude of which was more than:

(i) 2MW; and

(ii) either 2% of that capacity or 10MW.

This is shown in the graph below.

Figure 7 – Effective absolute limit under Alternative Modification P186 (compared with current Code limit and Proposed Modification P186)



The intention of applying a MW limit to small BM Units is to eliminate the administrative effort involved in monitoring and redeclaring GC/DC values following minor absolute breaches of a low capacity (which give rise to large percentage breaches and therefore currently require redeclaration).

The aim of applying a percentage limit to breaches above the lower MW limit is to give larger BM Units a margin for error in proportion to their size and similarly eliminate the need for monitoring and redeclaring GC/DC following small absolute breaches (thus addressing the issue identified by the Modification Proposal).

'Capping' the percentage at an upper MW limit is intended to remove the risk that the application of a percentage threshold to high-capacity BM Units could result in large absolute breaches, and thereby remove the possibility of any consequential impact on the provision of Credit Cover.

More detail regarding this rationale can be found in Section 1.8.

Please note that the Alternative Modification would therefore impact all BM Units (in contrast to the Proposed Modification, which impacts only those BM Units with a capacity greater than 50MW).

1.8 Issues raised by the Alternative Modification

This section outlines the discussions of the Modification Group regarding the following issues raised by the Alternative Modification:

- The development of lower and upper MW limits for the application of a percentage redeclaration threshold, and the value of that percentage threshold; and
- Other potential Alternative Modifications considered but not progressed by the Group.

A summary of the Group's views regarding the cost-benefits of the Alternative Modification and its merits against the Applicable BSC Objectives can be found in Sections 1.9 and 1.10.

1.8.1 Development of lower/upper MW limits and percentage threshold

a) Distinction between 'material' and 'non-material' breaches

The Modification Group agreed that a potential Alternative Modification would be to treat breaches in relation to their materiality, rather than equally as under the current Code baseline and the Proposed Modification. The Group agreed that applying only a percentage threshold would not remove the onerous requirement for low-capacity BM Units to estimate GC/DC to within a small degree of absolute accuracy, whilst it would also allow large absolute breaches by high-capacity BM Units. The Group therefore considered whether setting lower and upper MW limits to the application of the percentage threshold would address these issues, and might better facilitate the achievement of the Applicable BSC Objectives by benefiting all BM Units without increasing the risk to other Parties of Credit Cover underprovision.

b) Modification Group initial view

(i) Lower MW limit

The Modification Group unanimously agreed that a minimum capacity should be set under which breaches of the percentage threshold would not require redeclaration, due to their small absolute size. A level of 0-100MW was developed by the Group as being an accepted definition of 'small' capacity. In addition, members of the Group believed that part of the rationale for the original Code redeclaration thresholds of 0.5MW/1% may have been that 50MW had been the Generation Licence upper exemption threshold under the Electricity Act 1999. These members argued that, since this had been increased to 100MW under the Utilities Act 2000, this rationale no longer applied and the Code's GC/DC thresholds

should therefore require different levels of absolute accuracy for BM Units under/over 100MW rather than under/over 50MW as currently.[7]

The Group agreed that the absolute MW redeclaration threshold for BM Units under 100MW should be derived from applying the percentage limit to the 100MW minimum capacity.

(ii) Upper MW limit

The majority of Modification Group members also agreed that a maximum capacity should be set at which the percentage threshold should be 'capped' in order to automatically require redeclaration. A level of 500MW was developed as being representative of the capacity of a 'standard' large power station, with the Proposer's Representative believing that this would represent the two largest Consumption BM Units per Grid Supply Point Group. These members agreed that the absolute MW redeclaration threshold for BM Units over 500MW should be derived from applying the percentage limit to the 500MW maximum capacity.

One member of the group initially did not support the inclusion of an upper cap, arguing that an uncapped percentage would not negatively impact the provision of Credit Cover for the following reasons:-

- BSCCo's analysis shows that the inherent error in the CEI calculation is likely to be far greater than the forecast error of any one BM Unit (see Section 1.4.4);
- GC/DC values are used for only 8 days in the CEI calculation;
- The timescale for redeclaration means that the incorrect GC/DC value will already have been used in the CEI calculation, and a change in redeclaration thresholds would therefore have little impact; and
- There is already a 20% safety margin in the Credit Default arrangements.

This member therefore initially argued in favour of an uncapped percentage threshold for BM Units with a capacity greater than 100MW. However, in view of the concerns raised by some consultation respondents regarding Credit Cover, this member later agreed that a cap would be prudent and should be included (see below).

(iii) Percentage threshold

A majority of Modification Group members agreed that there may be merit in increasing the percentage threshold which would be applied to BM Units between the minimum and maximum capacities from 1% to a more realistic and less onerous level. A threshold of 2% was suggested, since this was believed to represent the average forecast error for Consumption BM Units.

Applying this 2% percentage threshold to the minimum 100MW and maximum 500MW capacities would therefore give a lower absolute limit of 2MW (under which redeclaration of GC/DC would not be required) and an upper absolute limit of 10MW (above which redeclaration would be automatically required). BM Units with a declared capacity of between 100-500MW would only be required to redeclare GC or DC following a breach by more than 2%.

One member of the Group was initially concerned that applying a 2% threshold could represent a significant relaxation since it would be a doubling of the present level. This member therefore initially suggested that the percentage threshold under the Alternative Modification should remain at 1%, which would give lower and upper MW limits of 1MW and 5MW respectively. The member argued that the

[7] The Group noted that 50MW is also the threshold for the requirement to submit FPN data under the Grid Code, but did not believe this to be relevant to P186.

inclusion of the lower 1MW limit would still deliver benefits against the current Code baseline, but that leaving the percentage threshold at 1% and including an upper cap would protect against any increased risk to the market. This view was also initially supported by an attendee at the meeting, who argued that the Alternative should be limited to a reinterpretation of the current Code thresholds such that a BM Unit would have to breach their declared GC/DC by more than both 0.5MW and 1% before redeclaration was required. The attendee noted that this would continue the existing 50MW capacity distinction, and that the 1% threshold could either be capped or uncapped. The attendee argued that a reinterpretation of the existing thresholds would be less of a departure from the current rules and would therefore have less impact on Parties.

The majority support for a 2%, and minority support for a 1%, threshold was also reflected in the responses received to the P186 Assessment Procedure consultation (see Section 6). At its final meeting, the Modification Group therefore undertook analysis to consider the impact of different thresholds on the number of GC/DC breaches. This analysis is provided below.

c) Analysis of impact of different absolute and percentage thresholds

The Modification Group considered BSCCo's analysis of the materiality of current GC/DC breaches, and the impact of the three baselines (current, Proposed Modification and Alternative Modification) on these breaches, as shown in the two graphs below.

Figure 8 – Current DC breaches shown by BM Unit capacity and breach amount

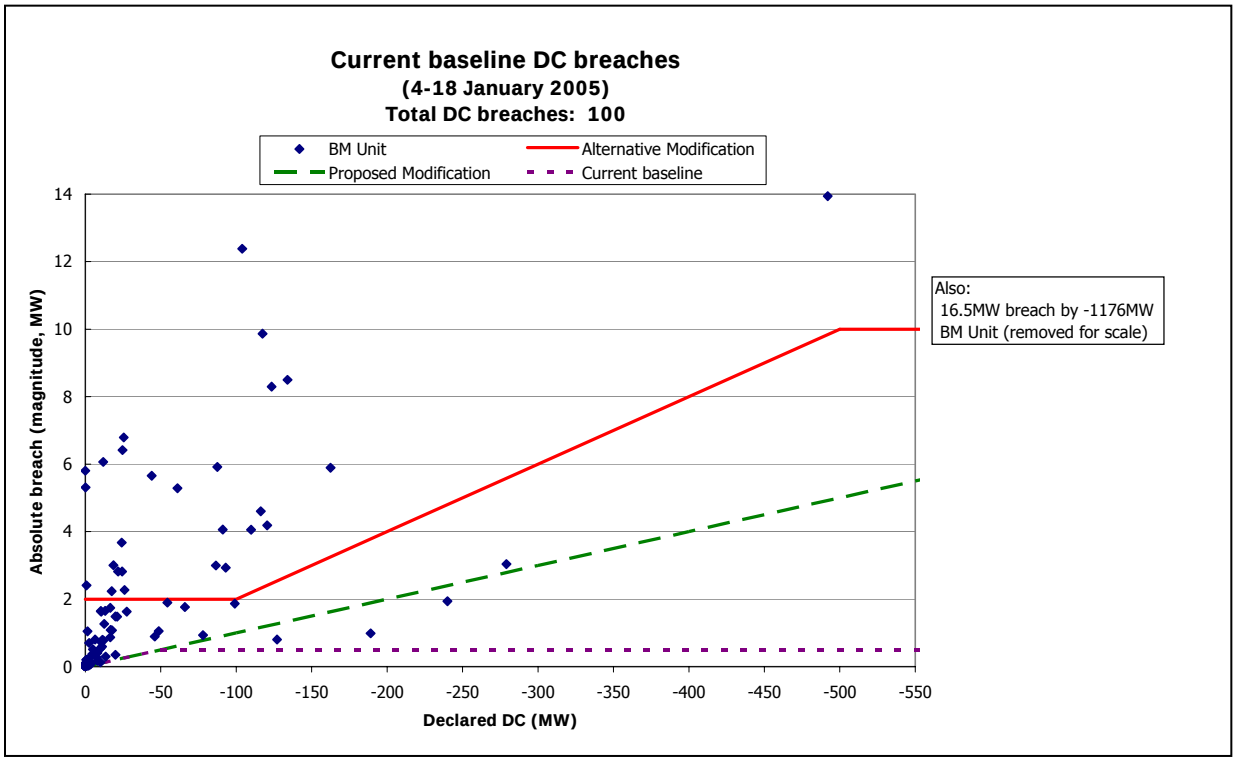
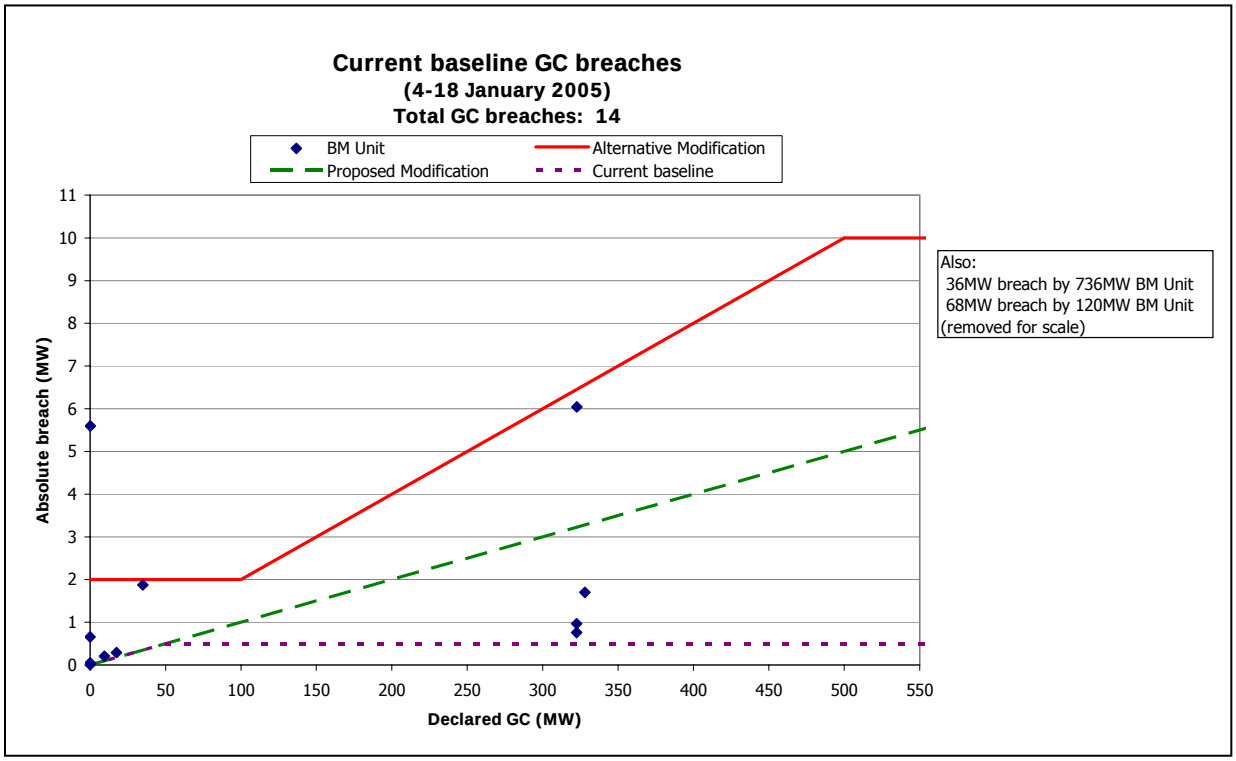


Figure 9 – Current GC breaches shown by BM Unit capacity and breach amount



The graphs show all BM Units which were in breach of their GC/DC during the sample BSC Winter fortnight of 4-18 January 2005, plotted by the declared capacity of the BM Unit and the breach amount in MW (NB: some higher-materiality breaches are not shown for reasons of scale but are listed separately to the right of the graphs).

The Modification Group noted that the majority of breaches were by BM Units with a capacity of under 100MW, suggesting that it is more difficult for smaller BM Units to accurately predict GC/DC to within a low percentage of their capacity. The Group therefore agreed that the Proposed Modification would only deliver minor benefits to small BM Units, and that the inclusion of a lower MW limit under the Alternative was key to removing the need to redeclare non-material breaches. Contrary to the initial concerns of some members, the Group noted that for BM Units over 100MW there appeared to be little difference between applying a 1% or 2% threshold since the main benefit of the Alternative would follow from the lower MW limit and not the relaxation of the percentage threshold. The Group therefore unanimously agreed to apply a 2% threshold under the Alternative, arguing that this would give a more realistic margin for error without increasing the risk to the market.

The Group noted that removing the 10MW upper limit and applying an uncapped 2% threshold would only have resulted in one less breach during the sample fortnight (the 16.5MW breach of DC), and that there could therefore be an argument against the inclusion of an upper cap. However, the majority of members considered that the cap would provide additional protection against the *possibility* of large material breaches and should therefore be retained. One member stated that they were uncomfortable with the uncapped 1% under the Proposed Modification, and would only support a move to a 2% threshold if the cap was included – since this would remove any possible risk to Credit Cover and the market. One member remained unconvinced that a cap was required, but stated that they would support its inclusion as a prudence measure if it offered additional reassurance to Parties. The Group therefore unanimously agreed to apply a 10MW cap to the 2% threshold, above which redeclaration would automatically be required.

1.8.2 Other Alternatives considered but not progressed by the Group

The following other potential Alternative Modifications were considered, but not progressed, by the Modification Group:

a) GC/DC redeclaration thresholds set by the Panel

The Proposer's Representative suggested that another viable Alternative Modification would be to remove the GC/DC redeclaration threshold amounts from the Code altogether, and instead allow the Panel to set and periodically review these in a similar way to the Credit Assessment Price or Continuous Acceptance Duration Limit (potentially via delegated authority to a Panel Committee). The Proposer's Representative expressed frustration that a Modification Proposal (with its associated costs) was required in order to change these values due to their 'hard-wiring' in the Code, and suggested that a Panel-set parameter would be more efficient. However, on balance, the Modification Group considered that such an Alternative would not offer any significant efficiency savings – since each Panel review would itself incur BSCCo administrative costs in undertaking analysis and producing paperwork, and would potentially also require industry consultation.

b) Redeclaration requirement linked to P/C status

The Modification Group initially considered that it was unnecessary and administratively inefficient to monitor GC breaches by Consumption BM Units and DC breaches by Production BM Units, since these could have no impact on the CEI calculation. The Group therefore considered a potential Alternative under which this existing requirement was removed. However, on further consideration the Group agreed that monitoring of such breaches was necessary in order to ensure that they could not become so large as to 'flip' the P/C status of the BM Unit. The Modification Group therefore decided against this solution – noting that the chosen Alternative Modification addresses both of these issues by not requiring redeclaration of breaches below a lower MW limit.

c) Redeclaration requirement linked to timing/number of breaches

The Modification Group noted that the Code requires all GC/DC breaches to be treated equally, regardless of the number of breaches or their length. The Group therefore considered a potential Alternative where redeclaration would only be required above a set minimum number of breaches or length of breach. However, the Group agreed that this would not take account of the materiality of breaches, and might thereby allow large absolute breaches whilst requiring small breaches to be redeclared. The Group believed that this approach would therefore not better facilitate the achievement of the Applicable BSC Objectives.

d) Redeclaration requirement linked to BSCCo/Panel Committee judgement on materiality

The Modification Group noted that the underlying issue with the current GC/DC redeclaration criteria is the lack of an ability to exercise discretion in what constitutes a 'material' breach of declared capacity. Some members of the Group therefore suggested that BSCCo (perhaps with the monthly agreement of a Panel Committee) should actively seek to enforce only those breaches which it judged to be material, since the enforcement process outlined in Annex 5 is not mandated in the Code. These members suggested that this would eliminate unnecessary administrative effort for BSCCo. However, other members were uncomfortable with the principle of BSCCo exercising such discretion based on criteria which were not defined in the Code. This potential solution was not discussed further by the Group since it would not require a Modification Proposal, and was therefore outside the immediate scope of P186.

1.9 Modification Group's cost-benefit analysis of Alternative Modification

1.9.1 Costs and benefits to Parties

The two graphs below show BSCCo's analysis of the estimated reduction in GC/DC breaches under the Alternative Modification during the sample BSC Winter fortnight of 4-18 January 2005. The BM Units concerned are grouped by their declared capacity and type in order to illustrate the potential main beneficiaries of the Alternative Modification. Interconnector BM Units are shown separately, since their GC/DC values are not used in the CEI calculation and their breaches therefore have no impact on the provision of Credit Cover. Similarly, GC breaches by Consumption BM Units and DC breaches by Production BM Units are separately identified since these have no impact on CEI.

Figure 10 – Estimated number of GC breaches under Alternative Modification (compared with Proposed Modification and current Code baseline)

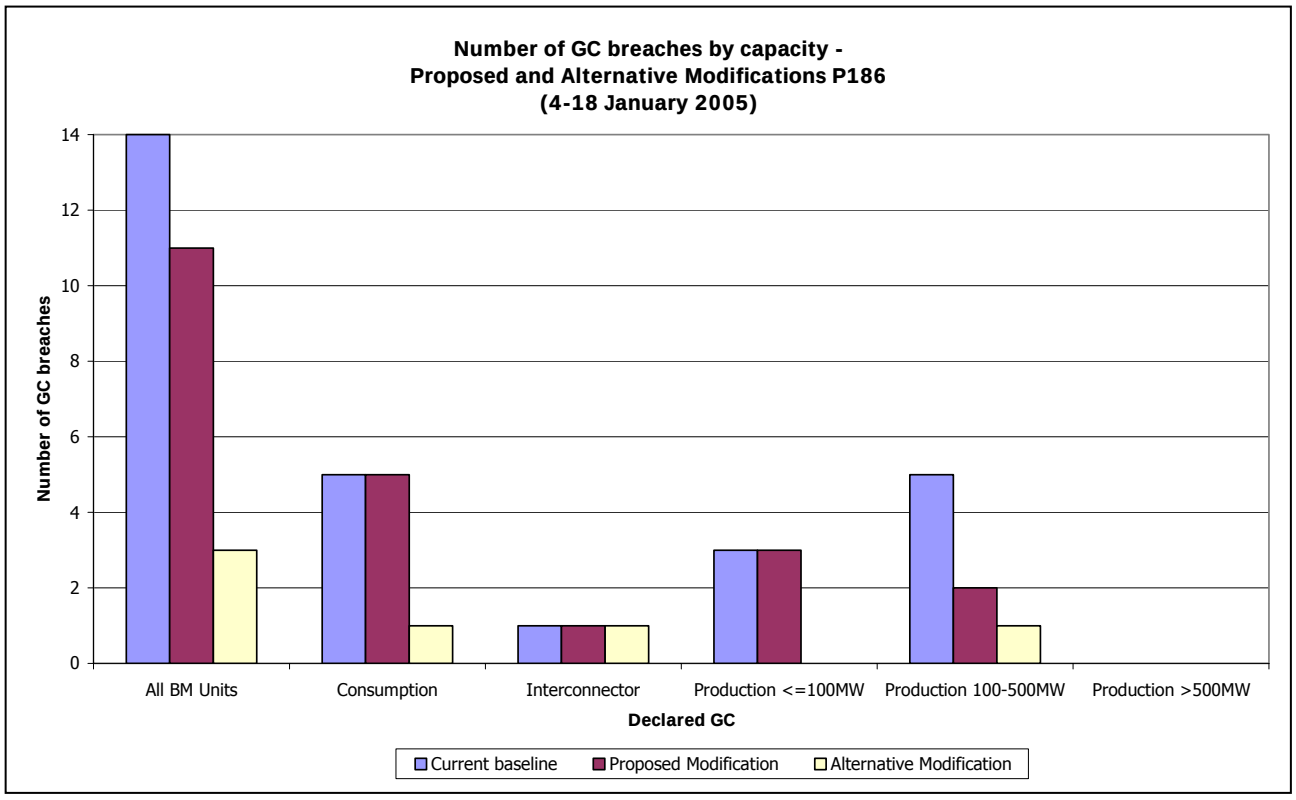
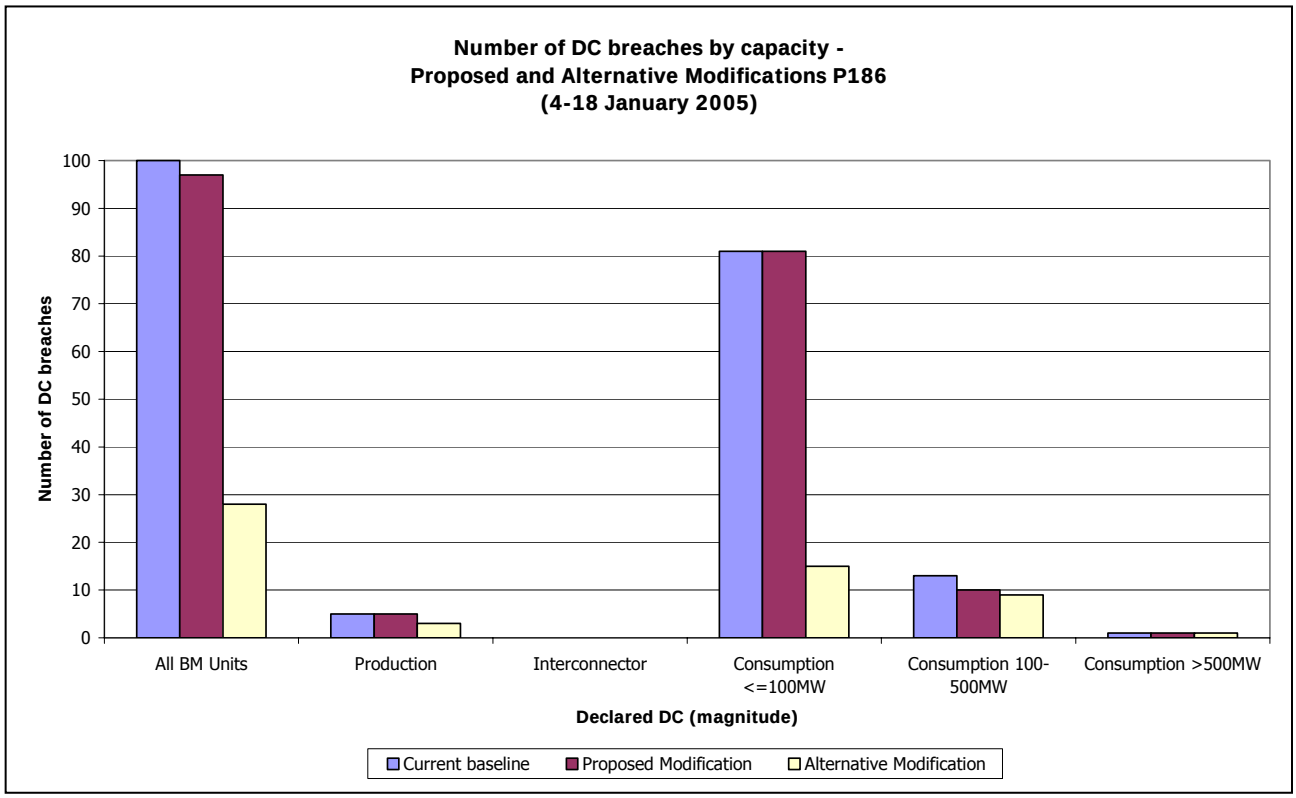


Figure 11 – Estimated number of DC breaches under Alternative Modification (compared with Proposed Modification and current Code baseline)



The Modification Group noted the following results of this analysis:

- The main beneficiaries of the Alternative Modification during the sample fortnight would have been BM Units with a capacity of less than 100MW, especially Consumption BM Units. This reduction would have resulted from the application of the lower 2MW limit, which would have removed the need to redeclare GC/DC following breaches of a zero capacity or small absolute breaches of a low capacity.
- BM Units with a capacity of between 100MW and 500MW would also have benefited from the relaxation of their effective limit to 2%.
- In this sample fortnight, only one non-Interconnector BM Unit with a capacity greater than 500MW breached the current redeclaration thresholds. This BM Unit would also have been required to redeclare under both the Proposed Modification's 1% limit and the Alternative Modification's 'capped' 10MW limit, but would not have been in breach if an uncapped 2% had been applied.

Overall, there would have been a 73% reduction in the number of BM Units in breach of their GC/DC under the Alternative Modification during the sample BSC Winter fortnight. BSCCo has compared this reduction with the 2004 BSC Summer sample fortnight of 8-19 July, where the overall reduction under the Alternative Modification would have been 58% of a total 79 GC/DC breaches. The estimated reduction in GC/DC breaches under the Alternative Modification is therefore estimated to be in the order of 58-73%. The Group noted the average estimate of 2 man hours per redeclaration quoted by consultation respondents (see Section 6), and that the Alternative Modification would therefore give greater scope for administrative savings than the Proposed Modification. The Group also noted the

view of consultation respondents that the Alternative Modification would remove the 'hassle' involved in redeclaring GC/DC values following non-material breaches.

The unanimous view of the Modification Group was that the Alternative Modification would benefit all BM Units by only requiring them to redeclare GC or DC following material absolute breaches – in contrast to the Proposed Modification, which would only benefit BM Units over 50MW. The main administrative savings would be for small BM Units with breaches under 2MW (whose low materiality would not pose any increased risk to the market) and for GC breaches by Consumption BM Units (which would have no impact on Credit Cover). In addition, by capping the maximum breach at a chosen upper MW limit, the Alternative would remove any concerns over the potential impact of a relaxation of the percentage threshold.

The majority of members therefore believed that the Alternative Modification would deliver greater benefits and cost-savings to Parties than the Proposed Modification, and would achieve the intention of the Modification Proposal that only material breaches should require redeclaration. One member remained uncertain that these efficiency savings would be fully realised due to the incentive to declare the least-negative DC possible, but was satisfied that the Alternative Modification would create the potential for savings whilst its upper MW cap would remove any risk to Credit Cover provision.

1.9.2 Costs and benefits to BSCCo

The majority of Modification Group members agreed that the Alternative Modification would also result in greater administrative savings for BSCCo than the Proposed Modification, since there would be an estimated 58%-73% reduction in the number of times its enforcement process was triggered – equating to an annual estimated saving of 23-28 man days' effort. One member agreed that the Alternative offered greater potential for cost-savings, but remained uncertain that these would be realised in practice since they believed that Parties were likely to push whatever DC tolerances were set.

The Modification Group noted that the Alternative Modification would only require changes to the Code and to the automated query used by BSCCo to compare declared GC/DC values with actual Metered Volumes. The Group therefore noted that the BSCCo implementation costs of the Alternative Modification were identical to those of the Proposed Modification, and were of a low magnitude.

1.10 Assessment of whether the Alternative Modification would better facilitate the Applicable BSC Objectives

In summary, the unanimous view of the Modification Group was that the Alternative Modification would better facilitate the achievement of Applicable BSC Objectives (c) and (d) when compared to both the Proposed Modification and the current Code baseline.

1.10.1 Applicable BSC Objective (c)

The majority of Modification Group members believed that the Alternative Modification would deliver greater cost and efficiency savings to Parties than both the Proposed Modification and current Code baseline, by only requiring Parties to redeclare GC/DC following material breaches. These members believed that these savings would therefore be spread across all BM Units with small absolute breaches, rather than only those above a certain capacity as under the Proposed Modification. These members therefore argued that the Alternative Modification would better facilitate competition and Applicable BSC Objective (c) than both the Proposed Modification and the current Code baseline.

The Group agreed that the upper MW breach limit set by Alternative Modification would offer greater reassurance than the Proposed Modification that relaxation of GC/DC redeclaration thresholds would not lead to underprovision of Credit Cover. The Group therefore agreed that there would not be any

adverse impact to competition or Applicable BSC Objective (c) as a result of the Alternative Modification.

One member remained unconvinced that the relaxation of the thresholds would necessarily lead to a reduction in the number of GC and DC breaches, since they believed there might still be an incentive for Parties to push the new DC tolerances in order to avoid an overestimation of their Energy Indebtedness. However, the member accepted that the Alternative appeared to offer greater potential for cost-savings than the Proposed Modification, and was satisfied that the upper MW cap would remove any risk to Credit Cover provision. The member therefore believed that the Alternative Modification would better facilitate the achievement of the Applicable BSC Objectives when compared with the Proposed Modification, and had the potential to do so when compared with the current Code baseline. The member therefore supported the recommendation that the Alternative Modification should be made.

1.10.2 Applicable BSC Objective (d)

The majority of Modification Group members believed that the Alternative Modification would also deliver greater cost and efficiency savings for BSCCo than the Proposed Modification, through a greater reduction in the number of GC and DC breaches it would be required to pursue. These members also considered that, by only requiring BSCCo to enforce redeclarations following material absolute breaches, the Alternative Modification could help reduce any perception by Parties that its enforcement of GC/DC accuracy was unnecessarily stringent or bureaucratic. These members therefore considered that the Alternative Modification would better facilitate Applicable BSC Objective (d) than both the Proposed Modification and the current Code baseline.

One member of the group remained unconvinced that the relaxation of the thresholds would necessarily lead to a reduction in breaches. However, this member believed that the Alternative would better facilitate the achievement of Applicable BSC Objective (d) than the Proposed Modification, since it would offer greater potential for efficiency savings – and had the potential to do so when compared with the current Code baseline. This member therefore supported the recommendation that the Alternative Modification should be made.

1.11 Governance and regulatory framework assessment

During its assessment of the Proposed and Alternative Modifications, the Modification Group considered the wider implications of P186 on the statutory, regulatory and contractual framework within which the Code sits. No impact was identified.

2 COSTS[8]

2.1 Costs of progressing P186 through the Modification Procedures

PROGRESSING MODIFICATION PROPOSAL	
Meeting Cost	£1,000
Legal/Expert Cost	£0
Impact Assessment Cost	£0
ELEXON Resource	30 man days £5,580

2.2 Implementation costs – Proposed and Alternative Modifications

The costs associated with the Proposed and Alternative Modifications are identical and are shown in the tables below.

IMPLEMENTATION COSTS				
		Stand Alone Cost	**P186 Incremental Cost**	**Tolerance**
Total Demand Led Implementation Cost		£0	£0	N/A
ELEXON Implementation Resource Cost		4 man days £880	4 man days £880	+/- 5%
Total Implementation Cost		£880	£880	+/- 5%

[8] Clarification of the meanings of the cost terms in this section can be found in Annex 7 of this report.

ONGOING SUPPORT AND MAINTENANCE COSTS

	Stand Alone Cost	P186 Incremental Cost	Tolerance
Service Provider Operation Cost	£0	£0	N/A
Service Provider Maintenance Cost	£0	£0	N/A
ELEXON Operational Cost	£0	£0	N/A

3 RATIONALE FOR MODIFICATION GROUP'S RECOMMENDATIONS TO THE PANEL

Although the majority of Modification Group members agreed that the Proposed Modification would better facilitate the achievement of Applicable BSC Objectives (c) and (d) than the current Code baseline, the unanimous view of the Group is that the Alternative Modification would better facilitate these objectives when compared with both the current baseline and the Proposed Modification.

The unanimous recommendation of the Modification Group is therefore that the Alternative Modification should be made with an Implementation Date of 10 Working Days following an Authority decision. In the event of an Authority decision to approve the Proposed Modification, the Group recommends an Implementation Date of 10 Working Days following the Authority's determination.

More detail regarding the Group's recommendations is contained in Sections 1.6 and 1.10, whilst the rationale for the proposed Implementation Date can be found in Section 9.

4 IMPACT ON BSC SYSTEMS AND PARTIES

The Modification Group has identified the following areas of impact which would result from the implementation of the Proposed Modification or Alternative Modification.

4.1 BSCCo

Table 5 – Impact of P186 on BSCCo

Area of Business	Impact of Proposed Modification	Impact of Alternative Modification
BSCCo systems	Amendment of the database query used by BSCCo to compare GC/DC values with actual BM Unit Metered Volumes via its Trading Operations Market Analysis System (TOMAS), in order to only identify 1% breaches.	Amendment of the database query used by BSCCo to compare GC/DC values with actual BM Unit Metered Volumes via TOMAS, in order to only identify breaches of the new redeclaration thresholds.
BSCCo processes	Potential reduction in the number of manual redeclaration requests issued by BSCCo.	As for Proposed Modification.
BSCCo documentation	Documentation of the new monitoring requirements within BSCCo's local working instructions.	As for Proposed Modification.

4.2 BSC Systems

No impact identified.

4.3 Parties and Party Agents

P186 would deliver a potential reduction in the number of GC/DC breaches, and therefore in the administrative effort incurred by Parties in redeclaring their BM Unit Metered Volume estimates.

P186 would have no impact on any Party Agents.

5 IMPACT ON CODE AND DOCUMENTATION

5.1 Balancing and Settlement Code

Table 6 – Impact of P186 on the Code

Code Section	Impact of Proposed Modification	Impact of Alternative Modification
Section K 'Classification and Registration of Metering Systems and BM Units'	Section K3.4.3: Removal of the 0.5MW absolute volume limit on GC/DC breaches.	Section K3.4.3: Replacement of the current 0.5MW/1% limits on GC/DC breaches with new percentage and lower/upper MW limits.

5.2 Code Subsidiary Documents

No impact identified. Although BSCP15 'BM Unit Registration' details the processes by which GC and DC values are submitted and redeclared, it refers to the Code for the specific criteria which trigger these processes.

5.3 BSCCo Memorandum and Articles of Association

No impact identified.

5.4 Impact on Core Industry Documents and supporting arrangements

No impact identified.

6 SUMMARY OF CONSULTATION RESPONSES

7 responses (representing 44 Parties) were received to the P186 Assessment Procedure consultation.

A summary of the consultation responses is provided in the table on the following page, and in Section 6.1. Full copies of the consultation responses are attached as Annex 3.

Table 7 – Summary of Assessment Procedure consultation responses

	Consultation question	Yes	No	No comment	Other
1.	Do you believe that the Proposed Modification would better facilitate the achievement of the Applicable BSC Objectives?	7 (44)	0	0	-
2.	Do you believe that the Alternative Modification developed by the Modification Group would better facilitate the achievement of the Applicable BSC Objectives, compared with the Proposed Modification and the current Code baseline?	7 (44)	0	0	-
3.	What do you believe the percentage redeclaration threshold should be under the Alternative Modification?	-	-	-	See Section 6.1.3
4.	What do you believe are the minimum/maximum BM Unit capacities that the percentage threshold should apply to under the Alternative Modification?	-	-	-	See Section 6.1.3
5.	On average, how many man hours/days are currently spent by your organisation on a single GC/DC redeclaration?	-	-	-	See Section 6.1.4
6.	Does your organisation currently overestimate its DC submissions?	2 (21)	4 (14)	-	1 (9) – see Section 6.1.4
	If so, would this practice change under P186?	1 (6)	5 (29)	-	1 (9) – see Section 6.1.4
7.	Do you believe that P186 would have an impact on the amount of Credit Cover lodged by your organisation?	2 (15)	5 (29)	-	-
8.	Do you believe there are any other issues that the Modification Group has not identified and that should be considered as part of the Assessment Procedure for P186?	-	7 (44)	-	-
9.	Are there any further comments on P186 that you wish to make?	2 (7)	5 (37)	-	-

6.1 Modification Group's summary of the consultation responses

6.1.1 Applicable BSC Objectives – Proposed Modification

All respondents unanimously agreed that the Proposed Modification would better facilitate the achievement of the Applicable BSC Objectives when compared with the current Code baseline.

a) Benefits of Proposed Modification

The arguments expressed by respondents were that:

- The Proposed Modification would result in a reduction in the number of GC/DC breaches and, as a result, would facilitate cost and efficiency savings for Parties and BSCCo;
- The Proposed Modification would potentially assist Parties through a reduction in the level of Credit Cover required, facilitating competition;
- By reducing the amount of times that a Party has to redeclare its GC or DC values after trivial breaches, the Proposed Modification would improve efficiency in the process and limit the amount of time wasted by BSCCo and Parties in adhering to an unnecessarily strict standard; and
- Although the reduction in breaches is estimated to be relatively small, the Proposed Modification would still deliver benefits against the current baseline since the cost of implementing P186 is expected to be minor.

All but one respondent who referred to specific objectives believed that the Proposed Modification would better facilitate the achievement of Applicable BSC Objectives (c) and (d). One respondent believed that the Proposed Modification would have a neutral impact on Applicable BSC Objective (c), since they believed it would have a neutral effect on Credit Cover (see Section 6.1.4).

b) Limitations of Proposed Modification

Although all respondents were supportive of the Proposed Modification, the following potential limitations were noted:

- The Proposed Modification would only benefit BM Units with a capacity greater than 50MW; and
- The estimated cost and efficiency savings for Parties and BSCCo would be of a relatively small magnitude.

One respondent was also concerned that an uncapped application of a percentage threshold could lead to material breaches by large BM Units – and that, although unlikely, this could potentially impact Credit Cover and have a detrimental effect on Applicable BSC Objective (c).

6.1.2 Applicable BSC Objectives – Alternative Modification

Although all respondents believed that the Proposed Modification would better facilitate the achievement of the Applicable BSC Objectives when compared with the current Code baseline, all respondents believed that the Alternative Modification developed by the Modification Group would better facilitate the achievement of the Applicable BSC Objectives when compared with both the current baseline and the Proposed Modification.

a) Benefits of Alternative Modification

The arguments expressed by respondents were that:

- The Alternative Modification would achieve a greater level of cost and efficiency savings for Parties and BSCCo, when compared with the Proposed Modification;
- The Alternative Modification would provide relaxation benefits for all BM Units and therefore be less discriminatory than the Proposed Modification;
- The inclusion of an upper MW limit on the application of the percentage threshold would provide additional protection against material breaches by the largest BM Units, and thereby alleviate concerns that the relaxation of the redeclaration thresholds could result in significant underprovision of Credit Cover;
- Although not increasing the risk to the market, the Alternative Modification would allow some Parties who currently overestimate their DC values to reduce their Credit Cover to a level more reflective of their actual liability; and
- The lower MW limit would avoid placing an unnecessary burden on small BM Units, by removing the need to redeclare following breaches which have an insignificant effect on the market.

All but one respondent who referred to specific objectives believed that the Alternative Modification would better facilitate the achievement of Applicable BSC Objectives (c) and (d) compared with both the Proposed Modification and the current Code baseline. One respondent believed that the Alternative Modification would have a neutral impact on Applicable BSC Objective (c), since they believed it would have a neutral effect on Credit Cover (see Section 6.1.4).

One respondent noted that a balance needed to be struck between relaxing the redeclaration thresholds to deliver administrative savings, and avoiding any increased risk to the market through the potential underprovision of Credit Cover. This respondent considered that the new thresholds proposed by the Modification Group under the Alternative Modification were reasonable and pragmatic, and that they would have little or no impact on the provision of Credit Cover. The respondent therefore argued that the main benefit of reducing the administrative burden on BSCCo and Parties could be achieved without any increased risk or cost to Parties. The respondent believed that the upper MW limit under the Alternative Modification was crucial to achieving this balance, since in their view it would limit any potential risk.

b) Remaining concerns of some respondents

Although all respondents supported the Alternative Modification, some respondents disagreed with the percentage threshold and/or the MW limits proposed by the Modification Group and suggested that these should be revised. These comments are discussed in more detail in Sections 6.1.3 and 6.1.5 below.

6.1.3 Alternative Modification redeclaration thresholds

a) Percentage threshold

(i) Majority view in support of 2% threshold

The majority of respondents agreed with the 2% redeclaration threshold proposed by the Modification Group, since they believed this reflected the average forecast error at BM Unit level. One respondent argued that this would allow Parties to notify accurate estimates of DC and GC, knowing that the monitoring tolerance reflects the accuracy of those estimates. Another respondent noted the inherent error in the CEI calculation, and did not believe that increasing the percentage threshold to 2% would

therefore have an adverse impact on Credit Cover or create any increased risk to the market. This respondent considered that a 2% redeclaration threshold would be an appropriate compromise between reducing the number of breaches and avoiding any increased market risk.

One respondent stated that a 2% threshold seemed sensible, but believed a modelling exercise of different values could be undertaken to determine the impact of any value on the market. This analysis was undertaken by the Modification Group at its final meeting (see Section 6.2).

(ii) Minority view against 2% threshold

One respondent believed that the existing Code thresholds should be retained but reinterpreted, such that BM Units would have to exceed their declared GC/DC by *both* 0.5MW and 1% before redeclaration was required. The respondent believed that this would be superior to both the Proposed Modification and current Code baseline, which could require small BM Units to redeclare following breaches by less than 0.5MW. The respondent therefore argued that a 1% threshold should be applied under the Alternative Modification, with a lower MW breach limit of 0.5MW below which redeclaration would not be required (see below).

Another respondent stated their view that demand estimation tends to be within 2%, and that applying a 2% redeclaration threshold therefore appeared reasonable. However, this respondent expressed nervousness that the proposed relaxation would be subjective and a doubling of the present level. The respondent therefore considered that continuation of the existing 1% limit would be more preferable, although they would not object if it was 2%. The respondent stated that they would not support a level higher than 2%.

b) Minimum / maximum BM Unit capacities

(i) Minimum 100MW capacity

The majority of respondents agreed with the minimum 100MW capacity proposed by the Modification Group, above which the percentage redeclaration threshold would apply. The arguments expressed were that the lower capacity reflects the Licence Exemption limit of 100MW, and that applying a lower MW limit would remove the need for Parties to redeclare GC/DC values following minor absolute breaches – achieving significant administrative savings for Parties and BSCCo.

A majority of these respondents also supported the 2% redeclaration threshold, and therefore agreed that this should be applied to the 100MW minimum capacity to give a lower limit of 2MW below which redeclaration would not be required. One respondent, who supported the continuation of the 1% limit, argued that 1% should be applied to derive a lower limit of 1MW. Another respondent who also supported a 1% threshold argued that the minimum capacity should be 50MW, giving a lower breach limit of 0.5MW. This would be a reinterpretation of the current thresholds, such that BM Units would have to exceed their declared GC/DC by both 0.5MW and 1% before redeclaration was required.

One respondent stated that a 100MW minimum capacity seemed sensible, but believed a modelling exercise of different values could be undertaken to determine the impact of any value on the market.

(ii) Maximum 500MW capacity

The majority of respondents agreed with the maximum 500MW capacity proposed by the Modification Group to give an upper MW 'cap' above which redeclaration would automatically be required (derived by applying the percentage threshold to the maximum capacity). The arguments expressed were that the higher tolerance reflects the size of a large BM Unit and would avoid any increased risk to Credit Cover and the market.

A majority of these respondents also supported the 2% threshold, and therefore agreed that this be applied to the 500MW maximum capacity to give an upper breach limit of 10MW. One of these respondents argued that capping the level of error at 10MW would provide protection to Parties against being exposed to a bad debt. Those respondents who supported the cap but argued in favour of a 1% threshold believed that the upper limit should be 5MW. One respondent considered that capping a 1% limit at 5MW would still be a reasonable level and an advance on the current thresholds, whilst removing the potential risks associated with the Proposed Modification.

One respondent did not support the inclusion of an upper cap, arguing that the Modification Group's analysis showed that the inherent error in the CEI calculation was likely to be far greater than the forecast error of any one BM Unit. This respondent therefore believed that applying an uncapped percentage threshold above a minimum capacity would not have any negative impact on Credit Cover.

One respondent stated that a 500MW maximum capacity seemed sensible, but believed a modelling exercise of different values could be undertaken to determine the impact of any value on the market.

6.1.4 Cost-benefits of P186

a) Administrative savings

Those respondents who provided figures estimated that their organisations spent between 1-4 man hours on a single GC/DC redeclaration (the average figure quoted being 2 man hours).

Two respondents considered that the time spent resubmitting GC/DC values is small, and would therefore rate as an inconvenience rather than a quantifiable resource issue. These respondents believed that the Proposed Modification and (to a greater extent) the Alternative Modification would, however, remove the 'hassle' involved in redeclaring GC/DC values following minor breaches.

One respondent noted that, following the implementation of P140, as an Interconnector the accuracy of their GC/DC submissions was of less concern since these values no longer fed into the calculation of their CEI. However, the respondent estimated that they had previously spent around half an hour of activity on resubmission when required.

Two respondents noted that the need for the GC/DC redeclaration form to be signed by the appropriate authorised signatory added to the effort and inconvenience involved in the current process.

b) DC overestimation

The majority of respondents stated that they do not intentionally currently overestimate their DC submissions, although one respondent noted a tendency to round up values as they are not a precise calculation. One respondent stated that their DC submission is based on the highest Settlement Period value that has been calculated by the demand forecast, whilst another added that their DC values were submitted in accordance with the 'good faith' principle set out in Section K3.4.3 of the Code. One respondent stated that they did not overestimate DC, but instead actively monitored their actual Metered Volumes against their declared value in order to remain compliant with the Code thresholds. Another respondent noted that, as an Interconnector, they had no credit incentive to either overestimate or underestimate DC.

A minority of respondents either indicated that they do currently overestimate DC, or agreed that there is an incentive to do so. One respondent considered that this might be in order to avoid frequent redeclarations, although noting that it could also be influenced by expected changes in customer base. One respondent considered that their practice of overestimating DC might change as a result of P186.

c) Credit Cover

The majority of respondents did not believe that either the Proposed or Alternative Modifications would have any impact on the amount of Credit Cover lodged by their organisations. One respondent stated that their organisation chooses to lodge excess Credit Cover to mitigate the risk of being placed in Credit Default. The respondent stated that this is a commercial decision, and would not be affected by P186. Another respondent noted that, as an Interconnector, the amount of Credit Cover lodged by their organisation was unrelated to their GC/DC values.

A minority of respondents did believe that the Proposed and Alternative Modifications would impact their provision of Credit Cover. One respondent stated that their organisation generally provides more Credit Cover than it is required to, and that they might therefore review current policy if P186 was implemented. Another respondent suggested that they might be able to reduce their Credit Cover in proportion to the level of DC reduction achieved by P186.

6.1.5 Additional comments

No respondents believed there to be any issues that the Modification Group had not identified and which should be considered as part of the P186 Assessment Procedure.

A majority of respondents had no additional comments on P186. A minority of respondents reiterated arguments made elsewhere in their responses, specifically:

- One respondent repeated their suggestion that the existing Code thresholds should be retained but reinterpreted, such that BM Units would have to exceed their declared GC/DC by *both* 0.5MW and 1% before redeclaration was required. The respondent argued that this would provide the benefits sought by P186 without increasing market exposure to bad debts, and would be a 'minimum change' option.
- One respondent reiterated their view that an upper cap under the Alternative Modification was not required.

6.2 Comments and views of the Modification Group

At its final meeting on 23 March 2005, the Modification Group considered the views expressed in the consultation responses and undertook analysis of the impact of different redeclaration thresholds on GC and DC breaches. As a result of this analysis, the Group unanimously agreed that a 2% threshold should be applied under the Alternative Modification – with lower and upper MW limits of 2MW and 10MW respectively. Those Modification Group members or attendees whose organisations' consultation responses had disagreed with these thresholds confirmed that they supported the Group's analysis and recommendations. Further detail can be found in Section 1.8.1.

The Modification Group reiterated its majority view that the Proposed Modification would have a neutral impact on the provision of Credit Cover, due to the inherent error in the CEI calculation and other commercial factors behind the amount of cover lodged by Parties. The unanimous view of the Group was that the upper MW cap under the Alternative Modification would offer additional reassurance to the market that they would not be exposed to any bad debts resulting from a relaxation of the current rules. Further detail can be found in Sections 1.4.4 and 1.8.1.

7 SUMMARY OF TRANSMISSION COMPANY ANALYSIS

7.1 Analysis

The Transmission Company did not believe P186 would have any impact on its ability to discharge its responsibilities under the Transmission Licence, its systems or processes, or any Core Industry Document.

The Transmission Company supported the view of the Modification Group that the Proposed Modification would better facilitate the achievement of Applicable BSC Objectives (c) and (d) compared with the current Code baseline. However, the Transmission Company noted the view of the Group that the Alternative Modification could deliver greater cost and efficiency savings than the Proposed Modification, and that further views on these savings were being sought via the Assessment Procedure consultation.

A copy of the Transmission Company's analysis and impact assessment is contained in Annex 4.

7.2 Comments and views of the Modification Group

The Modification Group noted the view of the Transmission Company that P186 would have no impact on its processes.

8 SUMMARY OF EXTERNAL ADVICE

None commissioned.

9 IMPLEMENTATION APPROACH

The Modification Group noted the small magnitude of BSCCo effort which would be required to implement either the Proposed or Alternative Modification (see Section 2), and noted BSCCo's advice that it would require an implementation lead time of 10 Working Days to deliver the required changes.

Two possible implementation approaches were considered by the Modification Group as follows:

a) An Implementation Date of the first calendar day of a BSC Season.

Since the P186 final Modification Report would not be issued to the Authority until late May 2005, this would give potential Implementation Dates of:

- 1 September 2005 (the first day of the BSC Autumn season) if an Authority decision is received on or before 17 August 2005 (10 Working Days' lead time); or
- 1 December 2005 (the first day of the BSC Winter season) if an Authority decision is received after 17 August 2005 but on or before 17 November 2005.

The potential advantage of this approach would be the consistent application of one set of GC/DC redeclaration rules throughout a BSC Season, without a mixture of 'old' and 'new' criteria. This would allow Parties to submit their pre-season estimates knowing that the new P186 thresholds would apply to those estimates.

b) A 10 Working Day Implementation Date.

The advantage of this approach would be the ability to implement P186 straightaway, rather than delaying the achievement of any benefits until the next BSC Season. This approach would require a switch from the existing criteria to the new P186 thresholds part-way through a season.

BSCCo confirmed that it was able to implement either approach. The Modification Group unanimously agreed that it was desirable to achieve the benefits of P186 as soon as possible, and therefore agreed to recommend a 10 Working Day Implementation Date for both the Proposed and Alternative Modifications. The Group noted that the new rules would therefore come into effect party-way through a BSC Season on a calendar day basis. Since BSCCo's fortnightly monitoring compares a BM Unit's GC/DC values with its most positive/negative Metered Volume in a BSC Season, the new P186 thresholds would therefore be applied retrospectively to the start of the season. The Modification Group did not believe this to be an issue, since the new thresholds would be a relaxation of current obligations and as such should only have a positive impact on Parties.

10 DOCUMENT CONTROL

10.1 Authorities

Version	Date	Author	Reviewer	Change Reference
0.1	1 April 2005	Kathryn Coffin	Tom Bowcutt	For peer review
0.2	1 April 2005	Kathryn Coffin	P186 Modification Group	For Modification Group review
0.3	4 April 2005	Kathryn Coffin	Sarah Parsons	For technical review
0.4	6 April 2005	Kathryn Coffin	Change Delivery	For quality review
1.0	8 April 2005	Change Delivery	BSC Panel	For Panel decision

10.2 References

Ref	Document	Owner	Issue date	Version
1	Initial Written Assessment for Modification Proposal P186 ELEXON - Modification Proposal 186	BSCCo	04/02/05	1.0
2	Assessment Consultation for Modification Proposal P186 ELEXON - Modification Proposal 186	BSCCo	07/03/05	1.0

ANNEX 1 DRAFT LEGAL TEXT

Draft legal text for the Proposed and Alternative Modifications is provided as separate documents Annex 1A and Annex 1B.

ANNEX 2 MODIFICATION GROUP DETAILS

Member	Organisation	22/02/05	23/03/05
Tom Bowcutt	ELEXON (Chair)	✓	✓
Kathryn Coffin	ELEXON (lead analyst)	✓	✓
Ben Willis	Npower (Proposer's Representative)	✓	✓
Andrew Colley	Scottish and Southern	✓	
Mark Manley	British Gas Trading	☎	✓
Man Kwong Liu	SAIC Ltd	✓	✓
Neil Smith	E.ON	✓	✓
Steve Drummond	EDF Trading	✓	

Attendee	Organisation	22/02/05	22/03/05
Liz Chester	Ofgem		✓
Ndidi Njoku	Ofgem		✓
Dave Wilkerson	ELEXON (technical support)	✓	✓
Roger Harris	ELEXON (technical support)	✓	
Gareth Evans	Total Gas & Power Limited	✓	✓
David Lane	Cornwall Consulting		✓

P186 Modification Group Terms of Reference

Modification Proposal P186 will be considered by a new Modification Group, the 'P186 Modification Group' (formed from members of the Settlement Standing Modification Group), in accordance with the following Terms of Reference.

P186 – Rationalising the criteria for the submission and redeclaration of Demand and Generation Capacities

ASSESSMENT PROCEDURE

The Modification Group will carry out an Assessment Procedure in respect of Modification Proposal P186 pursuant to section F2.6 of the Balancing and Settlement Code.

The Modification Group will produce an Assessment Report for consideration at the BSC Panel Meeting on 14 April 2005.

The Modification Group shall consider and/or include in the Assessment Report as appropriate:

- **Materiality of issue** – analysis to determine the frequency with which the issue identified by P186 occurs (i.e. how many breaches of the current Code thresholds occur each fortnight, and how many of these breach the 0.5MW but not the 1% limit). This will enable an assessment of the cost of compliance and the potential administrative savings of P186 for Parties and BSCCo.
- **Impact of current criteria on Credit Cover arrangements** – an assessment of whether the current 0.5MW limit leads Parties to overestimate DC for a BSC Season, and whether this leads to a material overprovision of Credit Cover by Parties with higher BM Unit Metered Volumes.
- **Importance of absolute accuracy versus relative accuracy** – an assessment of the respective merits of an absolute volume or relative percentage measure of accuracy (including combinations of both) in GC/DC submissions, including the following areas of discussion:
  - Whether removing the current 0.5MW absolute measure of accuracy would still ensure an adequate level of Credit Cover, and accurate Production/Consumption Status, for BM Units with high Metered Volumes (including an assessment of the cost/risk to other Parties).
  - Whether 1% is considered by Parties to be a realistic margin for error (based on analysis of how many breaches of the 1% limit occur each fortnight), or still contains the risk of overestimation.
  - Whether applying only a relative measure of accuracy could itself be inequitable, since the margin for absolute error would increase according to the size of a BM Unit.
  - Whether it would be more appropriate to replace the current 0.5MW limit with another absolute volume threshold rather than remove the absolute requirement altogether.
  - Whether there are any other issues associated with the Code's GC/DC redeclaration criteria, for example breaches of zero values or the number/length of breaches.
- **Interaction with Transmission Company processes** – whether there would be any interaction between P186 and the Transmission Company's processes under other industry codes (e.g. monitoring of Connection Entry Capability (CEC) values).

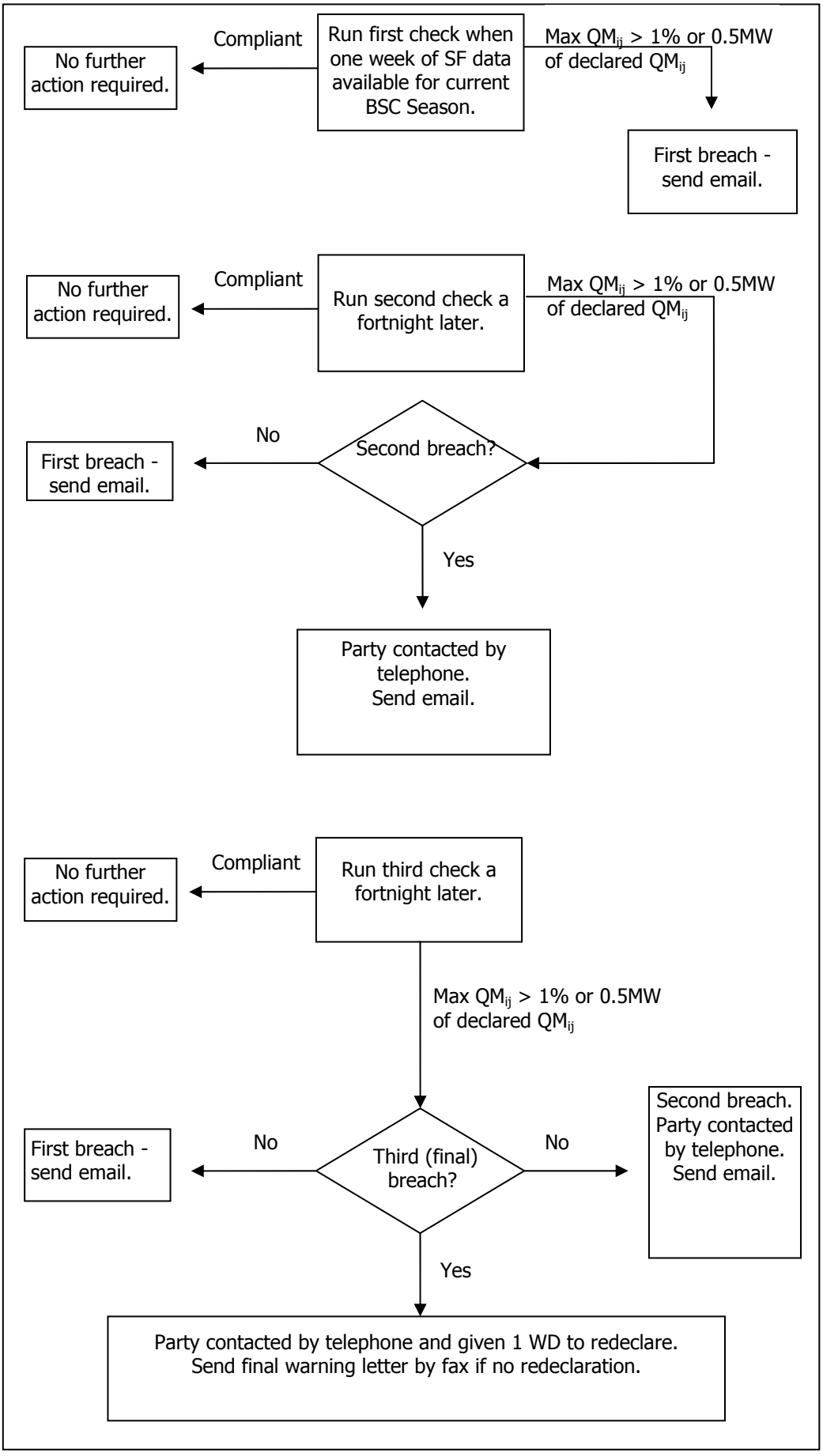
ANNEX 3 ASSESSMENT CONSULTATION RESPONSES

Attached as separate document Annex 3A.

ANNEX 4 TRANSMISSION COMPANY ANALYSIS

Q	Question	Response
1	Please outline any impact of the Proposed Modification and/or the Alternative Modification on the ability of the Transmission Company to discharge its obligations efficiently under the Transmission Licence and on its ability to operate an efficient, economical and co-ordinated transmission system.	No impact has been identified as a result of this Modification Proposal on the ability of the Transmission Company to discharge its obligations under the Transmission Licence.
2	Please outline the views and rationale of the Transmission Company as to whether the Proposed Modification and the Alternative Modification would better facilitate achievement of the Applicable BSC Objectives.	We support the initial views expressed by the Modification Group that the Proposed Modification would better facilitate the achievement of Applicable Objectives c) and d) against the current baseline. However we note the further views expressed that the Alternative Modification could deliver greater cost and efficiency savings but we are aware that further views are being sought through the assessment consultation on participants DC submissions/credit cover which could give further support to the Alternative proposal.
3	Please outline the impact of the Proposed Modification and/or the Alternative Modification on the computer systems and/or processes of the Transmission Company, including details of any changes to such systems and/or processes that would be required as a result of the implementation of the Proposed Modification or Alternative Modification.	No impact has been identified on the computer systems and processes of the Transmission Company resulting from this modification proposal.
4	Please outline any potential issues relating to the security of supply arising from the Proposed Modification and/or Alternative Modification.	No issues have been identified.
5	Please provide an estimate of the development, capital and operating costs (broken down in reasonable detail) which the Transmission Company anticipates that it would incur in, and as a result of, implementing the Proposed Modification or Alternative Modification.	No costs have been identified.
6	Please provide details of any consequential changes to Core Industry Documents and/or the System Operator-Transmission Owner Code that would be required as a result of the implementation of the Proposed Modification or Alternative Modification.	No consequential changes have been identified.
7	Any other comments on the Proposed Modification and/or Alternative Modification.	No further comments.

ANNEX 5 BSCCO MONITORING PROCESS FOR GC/DC VALUES



ANNEX 6 EXPLANATION OF THE CODE'S ENERGY INDEBTEDNESS CALCULATION

Principles of Credit Cover and the Energy Indebtedness Calculation

Payments to and from Parties in respect of Trading Charges arising on any particular Settlement Day are made, on average, 29 calendar days later. Thus, at any given time, Parties may have debts (or be due payments) in respect of Trading Charges incurred, on average, over the previous 29 days. The purpose of Credit Cover is to ensure that, should a Party default on payments, sufficient collateral is available to pay these debts.

After Gate Closure for each Settlement Period the Energy Contract Volume Aggregation Agent (ECVAA) calculates the Credit Cover Percentage (CCP) for each Party. CCP reflects the Party's Energy Indebtedness, which is an approximation of its expected Trading Charges for the last 29 days, divided by the amount of Credit Cover it has lodged. Should this CCP exceed defined thresholds the Credit Default provisions specified in Section M3 of the Code will be triggered, in order to prevent the market from being exposed to unsecured liabilities.

The calculation of Energy Indebtedness is itself a composite of two sub-calculations – Actual Energy Indebtedness (AEI) and Credit Assessment Energy Indebtedness (CEI), with the latter used for that portion of the 29-day period for which Interim Information Settlement Run data is not available. These calculations are prescribed in Section M of the Code. An explanation of the role of GC and DC in the CEI calculation is given below. Please note that, following implementation of Approved Modification P140, the CEI calculation for Interconnector BM Units is now based on Period FPN rather than CALF and GC/DC and is therefore not explained here. Similarly, no attempt is made here to further explain the use of AEI, which does not use GC and DC values.

Current rules for calculating CEI for non-Interconnector BM Units

CEI is calculated as:

$$CEI_{pj} = - (\sum_{a,i} CAQCE_{iaj} - \sum_{a} QABC_{aj})$$

Where $QABC_{aj}$ is the Account Bilateral Contract Volume in MWh (i.e. the Party's contracted position as notified to the ECVAA).

With Credit Assessment Credited Energy Volume (CAQCE) for the Lead Energy Account for a Production BM Unit defined as:

$$CAQCE_{iaj} = (SPD * BMCAEC_{i}) - \sum_{a} CAQCE_{iaj}$$

With CAQCE for the Lead Energy Account for a Consumption BM Unit defined as:

$$CAQCE_{iaj} = (SPD * BMCAIC_{i}) - \sum_{a} CAQCE_{iaj}$$

With BM Unit Credit Assessment Export Capability (BMCAEC) defined as:

$$BMCAEC_{i} = CALF_{i} * GC_{i}$$

With BM Unit Credit Assessment Import Capability (BMCAIC) defined as:

$$BMCAIC_{i} = CALF_{i} * DC_{i}$$

With Generation Capacity (GC) defined as:

$$GC = G / SPD$$

Where G is the value of positive QM_{ij} notified under Section K3.4.1(a) of the Code in relation to the relevant BSC Season and SPD is the Settlement Period Duration (in hours).

With Demand Capacity (DC) defined as:

$$DC = D / SPD$$

Where D is the value of negative QM_{ij} notified under Section K3.4.1(a) of the Code in relation to the relevant BSC Season and SPD is the Settlement Period Duration (in hours).

Explanation of CALF

CAQCE represents an estimate for each BM Unit of its physical position based on the capacity of the BM Unit and its 'likely load'. The 'likely load' is called the Credit Assessment Load Factor (CALF) and is calculated from the history of the BM Unit.

CALF values vary across the year and seasonal values are therefore calculated. Holiday CALF values may also be calculated for Christmas and Easter for Supplier BM Units.

ANNEX 7 CLARIFICATION OF COSTS

There are several different types of costs relating to the implementation of Modification Proposals. ELEXON implements the majority of Approved Modifications under its CVA or SVA Release Programmes. These Programmes incur a base overhead which is broadly stable whatever the content of the Release. On top of this each Approved Modification incurs an incremental implementation cost. The table of estimated costs of implementing the Proposed/Alternative Modification given in Section 2 of this report has three columns:

- **Stand Alone Cost** – the cost of delivering the Modification as a stand-alone project outside of a CVA or SVA Release, or the cost of a CVA or SVA Release with no other changes included in the Release scope. This is the estimated maximum cost that could be attributed to the implementation of any one Modification.

- **Incremental Cost** - the cost of adding the Modification to the scope of an existing Release. This cost would also represent the potential saving if the Modification was to be removed from the scope of a Release before development had started.

- **Tolerance** – the predicted limits of how certain the cost estimates included in the template are. The tolerance will be dependent on the complexity and certainty of the solution and the time allowed for the provision of an impact assessment by the Service Provider(s).

The cost breakdowns are shown on the following pages.

PROGRESSING MODIFICATION PROPOSAL	
Meeting Cost	This is the cost associated with holding Modification Group meetings and is based on an estimate of the travel expenses claimed by Modification Group members.
Legal/Expert Cost	This is the cost associated with obtaining external expert advice, usually legal advice.
Impact Assessment Cost	Service Provider Impact Assessments are covered by a pre-determined monthly contractual charge. Therefore the cost included in this report is an estimate based on the level of impact assessment that the Modification is expected to require and may not reflect the actual cost attributed to the Modification, which will be based on a percentage of the contractual impact assessment costs for each month that it is assessed.
ELEXON Resource	This is the ELEXON Resource requirement to progress the Modification Proposal through the Modification Procedures. This is estimated using a standard formula based on the length of the Modification Procedures concerned.

TOTAL DEMAND LED IMPLEMENTATION COSTS
This is calculated as the sum of the total Service Provider(s) Cost and the total Implementation Cost. The tolerance associated with the Total Demand Led Implementation Cost is calculated as the weighted average of the individual Service Provider(s) Costs and Implementation Costs tolerances. This tolerance will be rounded to the nearest 5%.

ELEXON IMPLEMENTATION RESOURCE COSTS
Cost quoted in man days multiplied by project average daily rate, which represents the resources utilised by ELEXON in supporting the implementation of the Release. This cost is typically funded from the "ELEXON Operational" budget using existing staff, but there may be instances where the total resources required to deliver a Release exceeds the level of available ELEXON resources, in which case additional Demand Led Resources will be required. The ELEXON Implementation Resource Cost will typically have a tolerance of +/- 5% associated with it.

ONGOING SUPPORT AND MAINTENANCE COSTS	
ELEXON Operational Cost	Cost, in man days per annum multiplied by project average daily rate, of operating the revised systems and processes post implementation.
Service Provider Operation Cost	Cost in £ per annum payable to the Service Provider(s) to cover staffing requirements, software or hardware licensing fees, communications charges or any hardware storage fees associated with the ongoing operation of the revised systems and processes.
Service Provider Maintenance Cost	Cost quoted in £ per annum payable to the Service Provider(s) to cover the maintenance of the amended BSC Systems. Note that from 1 January 2005, Service Provider Maintenance costs will be covered by a fixed contractual charge and so any Modification Proposals implemented after this date will not incur an ongoing Service Provider Maintenance cost.