Draft MODIFICATION REPORT for Modification Proposal P204 'Scaled Zonal Transmission Losses'

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This document has been distributed in accordance with Section F2.1.10 of the Balancing and Settlement Code.[2]

Proposed Modification P204 seeks to introduce a zonal scheme for the allocation of the variable (heating) element of transmission losses, whereby zonal Transmission Loss Factors (TLFs) would be calculated for each BSC Year on an ex-ante (forecast) basis for each GSP Group ('TLF Zone') using a Load Flow Model based on the solution for P198. Under P198, some BM Units in some TLF Zones (e.g. Generators in GSP Groups in the south and Suppliers in GSP Groups in the north) would be credited with energy through the Transmission Loss Multiplier (TLM) as a result of the introduction of zonal TLFs, whilst the Metered Volumes of other BM Units would be scaled down (i.e. they would receive an energy debit to fund that credit).

In contrast, P204 seeks to ensure that on average (as far as is practicable) no BM Units are credited with energy (i.e. receive payments), as a result of a zonal allocation of transmission losses, through the TLM. Under P198 a scaling factor of 0.5 is applied to the zonal TLFs. P204 proposes a different scaling factor calculated so that, on average, only energy debits due to losses would be sought, with no debit (or credit) sought for the most favourable locations. Furthermore, P204 proposes that that both zonal TLFs and scaling factors are calculated and applied on a seasonal basis, by each BSC Season.

No Alternative Modification has been developed for P204.

BSC PANEL'S RECOMMENDATIONS

Having considered and taken into due account the contents of the P204 draft Modification Report, the BSC Panel recommends:

- **that Proposed Modification P204 should not be made;**
- **an Implementation Date for Proposed Modification P204 of 1 April 2008 if an Authority decision is received on or before 22 March 2007, or 1 October 2008 if the Authority decision is received after 22 March 2007 but on or before 20 September 2007; and**
- **the proposed text for modifying the Code, as set out in the Modification Report.**

[1] ELEXON Ltd fulfils the role of the Balancing and Settlement Code Company ('BSCCo').
[2] The current version of 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 Modification Group has been able to assess, the following Parties/documents would be impacted by P204.

Please note that this table represents a summary of the full impact assessment results contained in Appendix 3 of the P204 Assessment Report. A copy of the P204 Assessment Report is attached as Appendix 3 to this Modification Report.

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

*New document/role introduced by P204

1 BACKGROUND

1.1 Types of Transmission Losses

Transmission losses can be considered to comprise two main elements:

- 'Fixed' losses are those which do not vary significantly with the power flow. In transformers, the losses arise from magnetising the iron core. In overhead lines, they include losses dependent on the voltage levels, length of line and climatic conditions; and
- 'Variable' losses arise through the heat caused by current flowing through the transformers and lines. Variable losses increase with the current (and associated power flow) and the length of line in which it flows.

References to 'total' transmission losses throughout this document are used to represent the sum of fixed and variable losses (i.e. the total energy lost from the Transmission System at any given point in time).

1.2 Existing Allocation Mechanism for Transmission Losses

Transmission losses are allocated to BSC Parties ('Parties') as part of their Trading Charges, by adjusting individual BM Unit Metered Volumes in Settlement through a Transmission Loss Multiplier (TLM). The rules and calculations for allocating transmission losses to Parties are set out in Section T2 of the Balancing and Settlement Code ('the Code').

Under the existing Code provisions, both fixed and variable transmission losses in each Settlement Period are allocated to Parties on a 'uniform' (non-locational) basis in proportion to each Party's metered energy. The current allocation of transmission losses therefore does not take account of the extent to which individual Parties give rise to such losses. Although a parameter for a 'differential' allocation of some or all transmission losses is included in the Code (the Transmission Loss Factor or TLF), this is currently set to zero so has no practical effect. The value of TLF can only be amended through a modification to the Code.

Further detail regarding the existing arrangements can be found in Section 2 of the P204 Assessment Report in Appendix 3.

1.3 Related Modification Proposals

There are currently three other Pending Modification Proposals being progressed in the area of zonal transmission losses. These proposals are currently with the Authority for decision. They are:

- Modification Proposal P198 'Introduction of a Zonal Transmission Losses Scheme' (raised by RWE Npower on 16 December 2005);
- Modification Proposal P200 'Introduction of a Zonal Transmission Losses Scheme with Transitional Scheme' (raised by Teesside Power Limited on 21 April 2006); and
- Modification Proposal P203 'Introduction of a Seasonal Zonal Transmission Losses Scheme' (raised by RWE Npower on 26 June 2006).

In addition, the P198 and P200 Modification Groups developed Alternative Modifications for both proposals. All of the proposals seek to introduce a locational allocation of variable losses through the calculation of 'zonal' TLF values, although their precise calculations and application of these values differ. A summary of the solutions can be found in Table 1 on the following page, whilst further detail regarding the proposals and their Alternatives can be found in the relevant Modification Reports. A copy of the P198 Modification Report is provided in Appendix 4. For the P200 and P203 Modification Reports, please see References 1 and 2 respectively.

Table 1 – Summary of Transmission Losses Modification Proposals

The key aspects of Modification Proposals P198, P200 and P203 are outlined below, and are shown against the P204 solution for comparison.

Aspect of Solution	P198 Proposed	P198 Alternative	P200 Proposed	P200 Alternative	P203 Proposed	P204 Proposed
Scope of Zonal TLF Calculation	Scaled Marginal (Variable Losses Only)	Scaled Marginal (Variable Losses Only)	Scaled Marginal (Variable Losses Only)	Scaled Marginal (Variable Losses Only)	Scaled Marginal (Variable Losses Only)	Scaled Marginal (Variable Losses Only)
Scaling Factor	0.5 (Single Scaling Factor Fixed in Code)	0.5 (Single Scaling Factor Fixed in Code)	0.5 (Single Scaling Factor Fixed in Code)	0.5 (Single Scaling Factor Fixed in Code)	0.5 (Single Scaling Factor Fixed in Code)	Scaling Factor calculated in advance, one for each BSC Season (same value for delivery and offtaking BM Units)
Aim of Scaling Factor	Ensure Total Variable Losses are Allocated Through Scaled TLFs in Isolation	Ensure Total Variable Losses are Allocated Through Scaled TLFs in Isolation	Ensure Total Variable Losses are Allocated Through Scaled TLFs in Isolation	Ensure Total Variable Losses are Allocated Through Scaled TLFs in Isolation	Ensure Total Variable Losses are Allocated Through Scaled TLFs in Isolation	Ensure Total Variable Losses are Allocated Through Scaled TLFs as part of TLM, with constraint that no BM Units are credited with variable losses
Applicable Period for TLFs	BSC Year	BSC Season	BSC Year	BSC Season	BSC Season	BSC Season
Nature of TLF Calculation	Ex-Ante	Ex-Ante	Ex-Ante	Ex-Ante	Ex-Ante	Ex-Ante
Frequency of TLF Calculation	Annual	Annual	Annual	Annual	Annual	Annual
Applicable Zones for Production BM Units	GSP Group	GSP Group	GSP Group	GSP Group	GSP Group	GSP Group
Applicable Zones for Consumption BM Units	GSP Group	GSP Group	GSP Group	GSP Group	GSP Group	GSP Group
Mitigation of Impacts?	No	Yes	Yes	Yes	No	No
Type of Mitigation	-	Linear Phasing	Hedging	Hedging	-	-
Period of Mitigation	-	4 Years	15 Years	15 Years	-	-

Please note that:

- The Panel's recommendation to the Authority contained in the Modification Reports for Proposed Modifications and their Alternatives (where applicable) for P198, P200 and P203, is that they should not be made; and
- All Modification Proposals; P198 (Proposed and Alternative), P200 (Proposed and Alternative), P203 and P204 are mutually exclusive, such that only one could be approved by the Authority for implementation.

2 DESCRIPTION OF MODIFICATION

This section outlines the solution for the Proposed Modification, as developed by the P204 Modification Group ('the Group') during the Assessment Procedure. No Alternative Modification was developed by the Group.

For a full description of the original Modification Proposal as submitted by British Energy Power and Energy Trading Ltd ('the Proposer'), please refer to the P204 Initial Written Assessment (IWA). Further background to the proposal can be found in Section 2 of the P204 Assessment Report in Appendix 3.

The solution agreed by the Group for Proposed Modification P204 is based on that developed by the P198 Modification Group for Alternative Modification P198, with the exception that it would not contain the phasing element of P198 Alternative and would employ a different scaling factor calculation and application, see Section 2.1.

P204 would allocate the variable element of transmission losses to Parties on a 'zonal' locational basis through the TLF, according to the extent to which each Party is estimated to give rise to variable losses. It involves the following 'scaled marginal' methodology for calculating locational TLFs:

1) An electrical model of the Transmission System (a 'Load Flow Model') would be built, containing 'Nodes' to represent points where energy flows on or off the Transmission System or where two or more circuits on the network meet. Each Node on the Transmission System would be identified by the Transmission Company, and would be allocated to a specific Zone on the transmission network on the basis of a 'Network Mapping Statement' maintained by BSCCo. The TLF Zones would be set by the Panel, based on the geographic areas covered by Grid Supply Point (GSP) Groups. Since there are currently 14 GSP Groups, there would therefore be 14 TLF Zones.

2) TLFs would be calculated on an ex-ante basis (i.e. forecasted) for each BSC Year, using Metered Volumes and Network Data for Sample Settlement Periods from a preceding 12-month period (the 'Reference Year'). The required Metered Volumes and Network Data would be provided by the Central Data Collection Agent and the Transmission Company respectively.

3) Prior to the start of each BSC Year (1 April – 31 March), the Load Flow Model would be run by a Transmission Loss Factor Agent ('the TLFA') to calculate how an incremental (or 'marginal') increase (or 'injection') in power at each individual Node would affect the total losses from the Transmission System. The output of the Load Flow Model would be a TLF value for each Node in each of the Sample Settlement Periods. Positive TLF values would be produced for Nodes where an incremental increase in generation (or reduction in demand) had the effect of decreasing total transmission losses. Negative TLF values would be produced for Nodes where an incremental increase in generation (or reduction in demand) had the effect of increasing total transmission losses. For example, if an injection of an extra unit of energy at a Node increased total losses by 0.02%, the TLF for that Node in that Settlement Period would be -0.02.

4) The TLFA would average these raw Nodal TLFs across all the Nodes in each TLF Zone by 'volume-weighted' averaging, to give 14 Zonal TLF values for each Sample Settlement Period (one per TLF Zone). The TLFA would then use 'time-weighted' averaging to convert these to Seasonal Zonal TLFs for each Zone in each BSC Season[3].

5) The TLFA would adjust the Seasonal Zonal TLFs by seasonal scaling factors (β) such that, as far as is practicable, no BM Units were credited with energy (i.e. effectively received payments for losses) through the application of TLM (see section 2.1 for a further description of the scaling factor calculation). These Adjusted Seasonal Zonal TLFs (four seasonal values for each of the 14 TLF Zones) and scaling factors would be made publicly available by BSCCo no less than three months prior to their use in the TLM Settlement calculation for the applicable BSC Year.

6) Each BM Unit would be allocated to a specific TLF Zone by BSCCo on the basis of the Network Mapping Statement, with any question or dispute over their zonal allocation to be resolved by the Panel. Using the Network Mapping Statement, the TLFA would determine the TLF value to be applied to each BM Unit in the TLM Settlement calculation for each BSC Season in the applicable BSC Year. The BM Unit-Specific TLF applied to a BM Unit in a particular Settlement Period would be the Adjusted Seasonal Zonal TLF value for the relevant BSC Season which was applicable to the Zone in which the BM Unit was located. All BM Units within a Zone would therefore receive the same single TLF value (the Adjusted Seasonal Zonal TLF for that Zone), for every Settlement Period within the applicable BSC Season.

7) The BM Unit-Specific TLFs calculated by the TLFA would be registered in BSC Systems by the Central Registration Agent, and would be used by the Balancing Mechanism Reporting Agent and the Settlement Administration Agent within the Balancing Mechanism Reporting Service and Settlement calculations respectively.

8) The remaining 'fixed' element of transmission losses would continue to be allocated to Parties on a non-locational basis as currently, and the existing overall 45:55 allocation of total transmission losses to generation and demand would be retained.

9) Under Proposed Modification P204, there would be no phased implementation or 'hedging' of exposure to the new zonal TLFs, which would therefore take full effect from the first Settlement Period on the Implementation Date.

10) Since the BSC Spring season (1 March – 31 May) spans the beginning of a new BSC Year on 1 April, the new set of TLFs for each year would come into effect part-way through this season. This would result in a changeover from the BSC Spring seasonal TLF value applied to a BM Unit in the last Settlement Period on 31 March to a new value for that season which was effective from the first Settlement Period on 1 April.

Further detail regarding the solution for the Proposed Modification can be found in Section 4 of the P204 Assessment Report in Appendix 3.

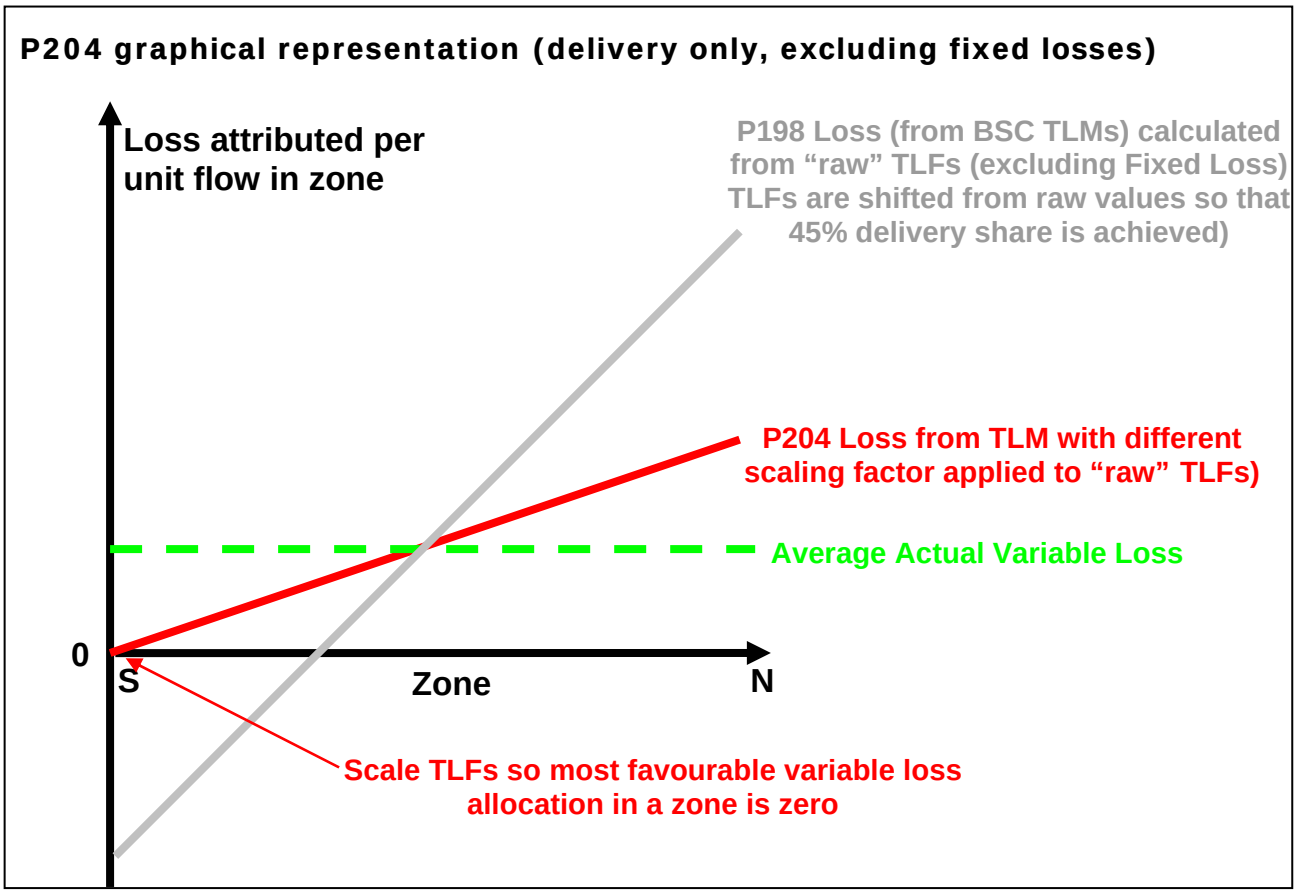
2.1 Key Features of the P204 Scaling Factor

Under the P204 solution developed by the Group, zonal TLF values would be calculated to allocate variable losses to BM Units on a locational basis, and the existing uniform allocation of fixed losses would be retained (45% to generation and 55% to demand overall). However, TLF values would be scaled such that, as far as is practicable, no BM Units were credited with energy (i.e. effectively received payments for losses) through the application of TLM.

[3] The BSC Seasons are already defined in Section K of the Code and are: BSC Spring (1 March – 31 May inclusive), BSC Summer (1 June – 31 August inclusive), BSC Autumn (1 September – 30 November inclusive) and BSC Winter (1 December – 28/29 February inclusive).

Under this approach, the most favourable outcome for a BM Unit would be a uniform allocation of fixed losses with no allocation of variable losses. This outcome would apply to BM Units in the most advantageous TLF Zone for the flow direction of the BM Unit – and would be a more favourable outcome for these BM Units than at present, where a uniform allocation of total losses (fixed and variable) applies. The least favourable position for a BM Unit would be in the Zone with the 'worst' scaled TLF (i.e. the most negative for generation and most positive for demand), where BM Units would be allocated fixed losses on a uniform basis and variable losses on a zonal basis, with a larger variable loss allocation than under the current uniform baseline. This would be a less favourable outcome for these BM Units than at present, where they receive a uniform allocation of both fixed and variable losses. Other Zones would have intermediate effects depending on the scaled TLF for the Zone. This is illustrated in Figure 1.

Figure 1 - Principle of P204 Scaling Factor



The key steps of the Proposed Modification are:

a) An annual calculation of Adjusted Seasonal Zonal TLFs so that as far as is practicable, on average, no BM Unit should expect to be credited with variable losses through the TLM mechanism (such that the most favourable outcome for a BM Unit would be a uniform allocation of fixed losses with no allocation of variable losses);

b) Calculation of scaling factors. This would utilise a calculation of four seasonal values of scaling factor in advance for each year, determined using calculated variable heating losses and zonal average TLFs and TLF weighted flows. The same values would be applied to both delivery and offtaking BM Units in each season;

c) Application of scaling factors in Settlement. The scaling factors would be applied to the seasonal zonal TLFs prior to input into Settlement; and

d) Publication of scaling factors: this would be an annual process, similar to publication of zonal TLFs under P198.

3 AREAS RAISED BY THE TERMS OF REFERENCE

The following areas were considered by the Group during the Assessment Procedure for P204:

- The detail of the P204 solution and legal text, and their interaction with those for the P198 Proposed and Alternative Modifications;
- The applicability of the results of the P198 external TLF modelling exercise conducted by Siemens PTI (PTI) to P204;
- The results of the Group's data analysis to establish the most appropriate scaling factor calculation;
- The applicability of the results of the P198 external cost-benefit analysis conducted by OXERA Consulting (OXERA) to P204 and the commissioning of further cost-benefit analysis for P204;
- Potential options for an Alternative Modification;
- The implementation approach and costs for the Proposed Modification (based on the responses received to industry impact assessments); and
- The responses received to the Assessment Procedure consultation.

These issues are discussed in the Assessment Report contained in Appendix 3, and are not covered further here.

4 IMPLEMENTATION APPROACH AND COSTS

During the P204 Assessment Procedure, separate impact assessments had been sought from BSC Agents, Parties, BSCCo and the Transmission Company of the Proposed Modification P204. Copies of the responses received can be found in Appendix 3 of the P204 Assessment Report.

The implementation costs of P204 are approximately £24,000 higher than for Proposed Modification P198 with marginally higher operational costs, due to the annual calcuation of the scaling factors by the TLFA. A summary of these costs is provided on the following page[4]. The same twelve-month lead time would also be required for Proposed Modification P204 as for Modification P198. A more detailed explanation of these costs and timescales can be found in Section 4.7 of the P204 Assessment Report.

The Group unanimously agreed that the Implementation Date for P204 should coincide with Parties' contractual rounds, such that the TLF values could be factored into Parties' contracts prior to their first use in Settlement. Given the required twelve-month lead time, the Group agreed that the earliest possible Implementation Date for P204 would therefore be 1 April 2008. The Group agreed a fall-back Implementation Date of 1 October 2008 on the basis that, whilst an October implementation might not be tied to Parties' full annual contract rounds, it would allow TLFs to be factored into autumn contracts and would prevent delaying implementation until the following April.

The new zonal TLF and scaling factor values would take effect from the first Settlement Period on the Implementation Date. For a 1 April 2008 implementation, this would also be the first Settlement Period on the first day of the BSC Year (part-way through the BSC Spring season). For a 1 October 2008 implementation (part-way through the BSC Autumn season), TLF and scaling factor values would only apply for six months during the first BSC Year of the scheme – from partway through the BSC Autumn season to part-way through BSC Spring, when the next year's BSC Spring TLF value and its related scaling factor would take effect. TLFs and scaling factors for all subsequent years would be applied on a seasonal basis for each full BSC Year.

[4] These costs have been updated from the figures quoted in the Assessment Report to correct an error in the total costs (in Assessment Report stated as £490,576, correct figure is £491,116).

The Group agreed that the legal text needed to be sufficiently flexible to cover the possibility of either an April or October implementation in the first year of the scheme. Clarifications were therefore included within the legal drafting to cover the eventuality that the Proposed Modification could be implemented part-way through a BSC Year.

PROPOSED MODIFICATION IMPLEMENTATION COSTS[5]

		Cost	Tolerance
LogicaCMG Cost	Change Specific Cost	£26,568[6]	Nil
	Release Cost	£17,923	Nil
	Total LogicaCMG Cost	£44,491	Nil
TLFA/LFMR Cost	Development, Testing and Deployment	£250,000	+/- 50%
	Scaling Factor calculation	£10,000	+/- 50%
BSC Audit Cost	Planning and Development	£15,000	+/- 50%
Implementation Cost	External Programme Audit	£0	Nil
	Design Clarifications[7]	£15,225	+/- 100%
	Additional Resource Costs	£0	Nil
	Additional Testing/Audit Support Costs	£20,000	+/- 50%
Total Demand Led Implementation Cost		**£354,716**	**+/- 50%**
ELEXON Implementation Resource Cost	Internal procedures/systems implementation	620 man days, £136,400	+/- 5%
Total Implementation Cost		**£491,116**	**+/- 35%**

PROPOSED MODIFICATION ONGOING SUPPORT AND MAINTENANCE COSTS

	Cost	Tolerance
LogicaCMG Operation Cost Per BSC Year	£0	Nil
LogicaCMG Maintenance Cost Per BSC Year	£0	Nil
TLFA/LFMR Operational Cost Per BSC Year	£110,000	+/- 50%
BSC Auditor Cost Per BSC Year	£40,000	+/- 50%
ELEXON Operational Cost Per BSC Year	75 man days £16,500	+/- 5%
Total Operational Cost Per BSC Year	**£166,500**	**+/- 45%**

[5] An explanation of the cost terms used in this section can be found on the BSC Website at the following link: http://www.elexon.co.uk/documents/Change_and_Implementation/Modifications_Process_-_Related_Documents/Clarification_of_Costs_in_Modification_Procedure_Reports.pdf

[6] This cost includes a scripted approach for loading the TLF values (see Section 4.7 of the P204 Assessment Report for further details).

[7] Based on 5% of combined LogicaCMG/TLFA/LFMR development costs.

5 RATIONALE FOR MODIFICATION GROUP'S RECOMMENDATIONS TO THE PANEL

This section summarises the recommendations of the Modification Group, as detailed in the Assessment Report in Appendix 3.

5.1 Assessment of Proposed Modification Against Applicable BSC Objectives

The **MAJORITY** view of the Modification Group was that the Proposed Modification **WOULD NOT** better facilitate the achievement of Applicable BSC Objectives when compared to the current Code baseline, for the following reasons stated below.

Table 2 – Modification Group's View of Proposed Modification

Proposed Modification better facilitates?	Applicable BSC Objectives				
	(a)	(b)	(c)	(d)	Overall
Yes	Minority	**Split**	Minority	None	Minority
No	None	**Split**	**Majority**	**Majority**	**Majority**
Neutral	**Majority**	Minority	None	Minority	Minority

Applicable BSC Objective (a) – The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence

The **MAJORITY** view of the Group was that the Proposed Modification would have a **NEUTRAL** effect on the achievement of Applicable BSC Objective (a). This was consistent with the view provided within the Transmission Company Analysis, where the Transmission Company concluded that P204 would have no impact on its ability to discharge its licence obligations (see Appendix 3 of the P204 Assessment Report).

The view of a **MINORITY** of members was that the Proposed Modification **WOULD** better facilitate the achievement of Applicable BSC Objective (a), by removing some of the market distortions and discrimination generated by the existing uniform allocation of variable losses. One member cited the view provided by the Authority in the P75 and original P82 decision letters that "addressing the cross-subsidy in the present transmission losses charging arrangements through more cost-reflective charging will also help to remove the discrimination that exists in the present arrangements", and believed that this argument was applicable to P204 to the extent that it removed part of this cross-subsidy.

No members believed that the Proposed Modification would have a negative effect on the achievement of Applicable BSC Objective (a).

Applicable BSC Objective (b) – The efficient, economic and co-ordinated operation of the GB transmission system

The Group were **SPLIT** on whether the Proposed Modification would or would not better facilitate the achievement of Applicable BSC Objective (b).

The members who believed that P204 **WOULD** better facilitate Objective (b) felt that the external cost-benefit analysis had indicated a reduction in the level of variable losses should the Proposed Modification be approved, as a result of more efficient short-term plant despatch – and that this would have a positive effect on Applicable BSC Objective (b). Although some of these members believed that the cost-benefit analysis demonstrated that the long-term signals provided by P204 might be ambiguous, they believed that the identified savings from redespatch would still deliver a net efficiency benefit.

One member considered that the benefits estimated by the cost-benefit analysis were very small compared to the overall level of losses, and that reality could be significantly different because of approximations or errors in the analysis. However, on the balance of evidence available, they believed that on average losses would be reduced relative to the baseline and therefore that Objective (b) would be better met.

One member of the Group also argued that, in addition to introducing more efficient short-term despatch, the Proposed Modification would introduce long-term signals influencing business decisions regarding investment in both generation and demand. This member believed that the results of the cost-benefit analysis demonstrated that Parties are already taking account of the possible introduction of a zonal transmission losses scheme in their planning decisions, since the introduction of such a scheme has been discussed for several years.

The members who believed that P204 **WOULD NOT** better facilitate the achievement of Applicable BSC Objective (b) did not believe that the Proposed Modification would lead to more efficient despatch. Noting that this was not necessarily supported by the cost-benefit analysis, these members considered that the analysis had been based on an economic despatch model which might not be representative of realistic market conditions.

One member stated that they did not believe that P204 would materially affect the Transmission Company's operation of the Transmission System. This member also noted that the seasonal TLF values calculated by OXERA for 2006/07 (prior to the application of the additional P204 scaling) were not identical to those calculated by PTI for that year. Although noting that this was a consequence of the cost-benefit analysis modelling approach (which calculated TLFs for three representative snapshots per season rather than the total 623 Sample Settlement Periods used by PTI across the four seasons), the member therefore questioned the despatch benefits identified by the cost-benefit analysis. The same member also considered that, at a time when the market is concerned over the security of supply, it was inappropriate to be considering changes which would impact the cost base of participants.

Two members believed that the benefits demonstrated by the cost-benefit analysis for the first two years 2006/7 and 2007/8 would not be realised as the Implementation Date for P204 was 1 April 2008. They also felt that as the loss savings for later years 2014/15 and 2015/16 showed a downward trend, the despatch benefits of P204 would be further reduced.

The view of one member was that the Proposed Modification would have a **NEUTRAL** impact on the achievement of Applicable BSC Objective (b). This view was generally based on the findings of the cost-benefit analysis that P204 would not result in the relocation of any existing generating plant. This member argued that this demonstrated that the Proposed Modification would not provide a long-term signal to the market relative to other existing signals, and that any efficiency benefit would therefore be negligible. They also considered that the short-term despatch signal of P204 remained unproven due to the fact that the cost-benefit analysis had been based on an economic despatch model which they believed might not be representative of realistic market conditions.

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 **MAJORITY** view of the Group was that the Proposed Modification **WOULD NOT** better facilitate the achievement of Applicable BSC Objective (c), and would have a negative effect on this Objective. These members noted the distributional effects of P204 highlighted in the cost-benefit analysis, and believed that these represented windfall gains and losses which would penalise existing investment decisions with a negative impact on competition. Some members disagreed with the findings of the cost-benefit analysis regarding renewables, which they argued would be disproportionately impacted by the Proposed Modification. Another member considered that it would be impractical for demand to respond to the P204

signals. Additionally, some members believed that the Proposed Modification would increase volatility and would raise the cost of capital for new entrants to the market, thereby representing a barrier to entry.

The view of a **MINORITY** of members was that the Proposed Modification **WOULD** better facilitate the achievement of Applicable BSC Objective (c). Some of these members believed that the distributional effects of the Proposed Modification were not significant, and that the allocation of variable losses which P204 would introduce would be more cost-reflective than the existing Code baseline. Some of these members also supported the principle of the Proposed Modification that no BM Units should be credited with energy (to have a collar) as a result of a zonal transmission losses scheme, since they believed that all BM Units contribute to the level of variable losses. The majority of the Group thought it was appropriate to have a collar as they agreed with the Proposer that each BM Unit considered in isolation causes losses on the system through the power flows associated with it.

One member did not believe that the distributional impacts of the Proposed Modification were a valid consideration against its approval, since they believed that these represented the partial removal of the cross-subsidy between Suppliers (north to south) and generators (south to north) which was inherent in the existing uniform allocation of variable losses. However, this member stated that – although they believed that the Proposed Modification would better facilitate the achievement of Applicable BSC Objective (c) compared with the existing Code baseline – P204 would only remove part of this existing cross-subsidy, since it would not be fully reflective of the contribution of each BM Unit to the level of variable losses. This member argued that collaring BM Units' allocation of losses to zero (such that no BM Units received energy credits) was arbitrary and inappropriate, since he believed that those BM Units whose actions contributed to a reduction in total system losses should receive payments in reflection of this contribution.

One member of the Group argued that the Proposed Modification would introduce long-term signals influencing business decisions regarding investment in both generation and demand. This member believed that the results of the cost-benefit analysis demonstrated that Parties are already taking account of the possible introduction of a zonal transmission losses scheme in their planning decisions, since the introduction of such a scheme has been discussed for several years. The same member also believed that the zonal nature of the scheme would ensure that individual BM Units were not unduly penalised, whilst basing the scheme on an ex-ante calculation would allow Parties to estimate the impact of TLFs on their charges and reflect these in their advance contracts. In addition, the member argued that Parties already took account of regulatory risk in becoming a Code signatory – and therefore did not believe that the Proposed Modification would have any impact in this area.

Applicable BSC Objective (d) – Promoting efficiency in the implementation and administration of the balancing and settlement arrangements

No members of the Group believed that the Proposed Modification would have a positive effect on Applicable BSC Objective (d). The **MAJORITY** of the Group believed that P204 would have a negative effect on this Objective. These members argued that the Proposed Modification would add cost and complexity to the BSC arrangements, reducing overall efficiency.

A **MINORITY** of members believed that the Proposed Modification would have a **NEUTRAL** effect on the achievement of Applicable BSC Objective (d). These members believed that the implementation costs of the proposal were not significant. Some members considered that increased cost and complexity in the balancing and settlement arrangements was not in itself a negative effect, if the process which was being introduced promoted efficiencies. One member believed that it was not necessarily inappropriate for money to be invested in administering the BSC arrangements.

Summary

On balance, a **MAJORITY** of members believed that any benefits under Applicable BSC Objective (b) would be limited and would be outweighed by a negative impact on Applicable BSC Objective (c). These members therefore believed that the Proposed Modification **WOULD NOT** better facilitate the achievement of the Applicable BSC Objectives overall, and should not be made. Some of these members also believed that the Proposed Modification would have a negative impact on Applicable BSC Objective (d).

A **MINORITY** of members believed that the Proposed Modification **WOULD** better facilitate the achievement of both Applicable BSC Objectives (b) and (c), and should therefore be made. Some of these members also believed that the Proposed Modification would better facilitate the achievement of Applicable BSC Objective (a).

One member believed that any potential benefit under Applicable BSC Objective (b) and any negative impact under Objective (c) would be finely balanced, and did not believe there to be any significant effects on Objectives (a) and (d). This member therefore stated that they remained **NEUTRAL** as to whether the Proposed Modification would better facilitate the achievement of the Applicable BSC Objectives overall.

5.2 Implementation Date

The Modification Group agreed the following recommended Implementation Dates for P204 Proposed Modification:

- 1 April 2008, if an Authority decision is received on or before 22 March 2007; or
- 1 October 2008, if an Authority decision is received after 22 March 2007 but on or before 20 September 2007.

An explanation of these dates can be found in Section 4. A specific question on the Group's recommended Implementation Dates was included within the P204 Assessment Procedure consultation, and details of the responses received can be found in Section 5.5 of the P204 Assessment Report in Appendix 3.

5.3 Legal Text

The Group reviewed the text for the Proposed Modification and agreed by majority that it delivered the solution developed by the Group. One member of the Group felt that further clarity was required in certain areas of the legal text which also appeared in the legal text for P198, P200 and P203 (which had in turn been based largely on the legal text for P82). None of these comments had previously been raised during the progression of the other transmission losses proposals, which had been issued to the Authority for decision by the time that the comments were made. In addition, two members of the Group suggested the inclusion of new solution requirements at, or following, the final P204 Modification Group meeting. Many of the comments were received late in the process which made their consideration by the Group more difficult. However, BSCCo was able to contact all but one member of the Group in order to confirm their views prior to the submission of the Assessment Report to the Panel. A majority of these members believed that the suggested changes to the text were not required, since they believed that the P204 legal text was sufficiently clear and should remain consistent with that for the other proposals. The Group noted that, with the exception of the suggested additional solution requirements, the comments related to points of style and clarity – and agreed with BSCCo's view that the text was legally robust and technically correct.

Although the Group by majority therefore did not believe that changes to the text were required, it was noted that (if P198, P200, P203 or P204 was approved by the Authority) there would be a twelve-month implementation timetable in which to re-examine in detail the clarity of the drafting. BSCCo agreed that, should the text require further clarification during implementation, it would seek to address the source of any such confusion via a 'housekeeping' modification at that time. A more detailed explanation of the Group's discussion and agreement of the legal text can be found in Section 4.10 of the P204 Assessment Report in Appendix 3.

5.4 Interaction with Modifications P198, P200 and P203

In accordance with the BSC Modification Procedures, P198, P200, P203 and P204 were assessed separately by their respective Modification Groups as to whether they would better facilitate the achievement of the Applicable BSC Objectives compared with the existing Code baseline – and not compared with each other.

The P204 Group noted that:

- the P198 Group, by majority, (which comprised a slightly different membership) had considered that both the Proposed and Alternative Modification would not better facilitate achievement of the Applicable BSC Objectives;
- the P200 Group, by majority, (which comprised a slightly different membership) had considered that both the Proposed and Alternative Modification would not better facilitate achievement of the Applicable BSC Objectives;
- the P203 Group, by majority, (which comprised a slightly different membership) had considered that the Proposed Modification would not better facilitate achievement of the Applicable BSC Objectives; and
- the Panel at its meeting on 14 September had endorsed the above Modification Group recommendations.

Furthermore, the P204 Group thought it would be useful to indicate a preference between P198, P200, P203 and P204, to inform the Authority when making its decision. Whilst recognising their recommendation that P204 should not be made, the P204 Group (by majority) believed that **P204** Proposed Modification would best facilitate the Applicable BSC Objectives in comparison with P198, P200 and P203 (both for their Proposed and Alternative Modifications where applicable). These members believed that P204 reduced the level of windfall gains and losses, whilst retaining the perceived benefits of a zonal transmission losses scheme. Furthermore, some of these members believed that a further benefit of P204 was that no BM Unit received energy credits (or payments for losses).

However, two members, who supported a zonal transmission loss scheme, believed that P203 Proposed Modification would best facilitate the Applicable BSC Objectives. One member believed that P200 would best facilitate the Applicable BSC Objectives due to its transitional hedging scheme. One member abstained since they maintained a neutral position on whether any of the proposals better facilitated the Applicable BSC Objectives.

6 RATIONALE FOR PANEL'S RECOMMENDATIONS TO THE AUTHORITY

6.1 Panel's Consideration of the Assessment Report

The Panel considered the P204 Assessment Report at its meeting on 12 October 2006. This section summarises the Panel's discussions in formulating its provisional recommendation for inclusion in the draft Modification Report. Details of the Report Phase consultation responses, the Panel's discussion of the responses and its final recommendation to the Authority can be found in Sections 6.2, 6.3 and 6.4 respectively.

6.1.1 Assessment Procedure Consultation Responses

A Panel Member noted that one respondent to the Assessment Procedure consultation had considered that it might be prudent to factor the possibility of a legal challenge into the proposed implementation timetable. BSCCo advised that this view had also been expressed by the respondent during the industry consultations for P198, P200 and P203. The P204 Modification Group had agreed that adding extra implementation lead time to cover the possibility of a legal challenge would not be necessary, as the Conditional Implementation

Date process introduced by Modification Proposal P180 allows further 'fall-back' Implementation Dates to be put forward to the Authority in the event of a judicial review or appeal.[8]

The Panel noted that, whilst many consultation respondents had believed P204 to represent the 'least worst' of the transmission losses proposals, the majority view of respondents was that P204 would not better facilitate the achievement of the Applicable BSC Objectives compared with the existing Code baseline. Some Panel Members noted that, of the four transmission losses proposals, P204 had the highest level of support amongst consultation respondents. However, two Panel Members commented that this was still only a minority view – and one stated that they did not believe that the argument that P204 was the 'least worst' option was sufficient to support a change against the current baseline.

The Panel made no further comments specifically on the P204 consultation responses.

6.1.2 Applicable BSC Objectives

The **MAJORITY** provisional view of the Panel was that the Proposed Modification **WOULD NOT** better facilitate the achievement of the Applicable BSC Objectives. Generally, these Panel Members believed that any benefits under Applicable BSC Objective (b) would be limited and would be outweighed by negative impacts on Objective (c). Many of these Panel Members also believed that there would be a negative impact on Objective (d).

The **MINORITY** provisional view of one Panel Member was that the Proposed Modification **WOULD** better facilitate the achievement of the Applicable BSC Objectives. This Panel Member believed that positive benefits under Applicable BSC Objective (b) would outweigh any potential negative impacts under Objective (c), which this Member believed to be minor.

The specific views expressed by Panel Members in relation to each Applicable BSC Objective are set out below.

Applicable BSC Objective (a) – The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence

No Panel Members identified any impact from P204 on the achievement of Applicable BSC Objective (a).

Applicable BSC Objective (b) – The efficient, economic and co-ordinated operation of the GB transmission system

One Panel Member believed that P204 would result in a positive net benefit under Applicable BSC Objective (b), although they believed that this benefit would be small. This Member acknowledged some of the difficulties and assumptions involved in undertaking forward-modelling of the market, but continued to support the principle that there should be a cost-reflective allocation of losses. Other Panel Members believed that Objective (b) would be marginally better facilitated through more efficient despatch, leading to a short-term reduction in the level of variable losses. However, these Members were generally concerned as to whether the modest benefit identified by the cost-benefit analysis would be realised in practice due to the assumptions involved in the modelling. Some Panel Members believed that there would be a neutral impact on the achievement of Objective (b), and were unconvinced that despatch savings would be realised – since they believed that the modelling assumptions might not represent realistic market conditions and/or take account of other commercial drivers in Parties' behaviour.

[8] Modification Proposal P180 'Revision to BSC Modification Implementation Dates, where an Authority decision is referred to appeal or judicial review'.

Those Panel Members who were neutral on whether P204 would better facilitate the achievement of Applicable BSC Objective (b), or who believed that it would only be marginally better facilitated, generally gave weight to the view of the Transmission Company in its analysis that it was unconvinced as to whether benefits would be realised in this area. These Members also agreed that the cost-benefit analysis demonstrated that P204 would not provide a long-term locational signal to the market relative to other existing signals which might have an equal or greater effect. One Panel Member believed that the lack of such a locational signal undermined the primary argument for introducing a zonal transmission losses scheme. In addition, these Members considered that the cost-benefit analysis demonstrated that the potential for longer-term savings in losses through redespatch would be reduced from 2012.

One Panel Member stated that they believed that the PTI and OXERA analysis had demonstrated that seasonal TLFs produced more accurate signals than annual values, and that an ex-ante approach would provide a more orderly market. However, they believed that a nodal application of TLFs would have been a more accurate (and therefore significantly superior) option to the zonal averaging approach proposed by P204. Another Panel Member also stated their preference for a nodal approach and questioned whether, if P204 was introduced, it would prove robust and stay in place over time. This Member also commented that the despatch benefits associated with P204 centred around the year 2009/10, suggesting that the benefits might be sensitive to the modelling assumptions used. In addition, the Member noted that the application of the scaling factors under P204 diluted the benefits associated with a zonal losses scheme. Although this Member was sympathetic to a non-uniform losses scheme in principle, they therefore stated that P204 was not their preferred approach.

Those Panel Members who believed that P204 would not better facilitate the achievement of Applicable BSC Objective (b) stated that they were unconvinced by the despatch benefits identified by the cost-benefit analysis. These Members generally reiterated the concerns expressed by other Members regarding the perceived dependence of the benefits on modelling assumptions, and the apparent lack of a long-term signal or benefit from the proposal.

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

Some Panel Members stated that they agreed with the principle of P204 that no BM Units should receive energy credits in respect of transmission losses. One Member believed that such energy credits would have created a greater distortion than the current baseline. Many members supported the intention of P204 to reduce the distributional effects of a zonal transmission losses scheme. However, one of these Members noted that, in so doing, the benefits of the scheme were also diluted – giving a dichotomy. One Panel Member commented that P204 appeared to undo some of the effects of a zonal losses scheme, which they believed made it difficult to assess.

Most Panel Members believed that the distributional effects of P204 remained significant enough to have a negative impact on competition and the facilitation of Applicable BSC Objective (c), since they believed that these effects would represent windfall gains and losses for existing investments. One Member believed that such windfalls could lead to stranded assets. Other Members believed that the total extent of the impact on Objective (c) remained unproven, but was likely to be negative. One of these Members noted that (in line with the Modification Group's requirements) the cost-benefit analysis had only estimated the distributional effects in the first year of the scheme, but believed that investors would look to the longer impact over ten years. One Panel Member did not agree that the distributional impacts of P204 would have a negative effect on the achievement of Applicable BSC Objective (c). This Member believed that, whilst the distributional effects might be perceived as unfair, 'fairness' did not form part of the Applicable BSC Objectives – and he therefore did not believe that there would be a long-term effect on competition.

Some Panel Members believed that P204 would create disproportionate impacts on renewables and/or Combined Heat and Power (CHP) plant, which these Members believed would be unable to respond to the signals of the scheme due to their need to locate close to customers or fuel sources. Some Members also believed that demand would be unable to respond to signals. One Member believed that these potential disproportionate impacts on different types of Party had not been fully considered. In relation to renewables, this Member did not agree with the conclusion of OXERA that any detrimental impact on renewables would be offset by the benefits afforded to them under the Renewables Obligation scheme. The Member also believed that zonal losses payments would effectively represent an additional tax for CHP. Other Panel Members disagreed, and did not believe there to be any technology issues associated with P204. One of these Members argued that the scheme was concerned with plant location, rather than plant type – and therefore considered that P204 would provide the desired locational disincentive on northern renewables, whilst incentivising renewable generation in the south.

Some Panel Members disagreed with the view of those Modification Group members who believed that P204 would increase the cost of capital. However, one of these Members stated that they had a particular concern regarding regulatory risk. This Member believed that, in the context of a requirement for new generation investment, it was imperative that Great Britain was seen as an inviting place to site plant – and that the previous public disparity between the views of the Authority and the Department of Trade and Industry regarding the merits of zonal loss charging sent a poor signal to the rest of the world and could negatively impact Applicable BSC Objective (c).

One Panel Member considered that the despatch benefits identified by the cost-benefit analysis were so small that they could be viewed as representing spurious accuracy, and might be negated by factors such as system constraints (although this Member acknowledged the difficulties involved in undertaking forward-modelling). This Member believed that the current uniform allocation of losses gave stability to the volume of losses, and therefore to the costs of Suppliers and their portfolios – and that any move away from this could undermine competition and negatively impact Objective (c). The Member also commented that the volume and price would be set by different mechanisms, and believed that this could be problematic. Another Panel Member commented on the variability in the TLMs produced by the cost-benefit analysis, and believed that the analysis relied heavily on assumptions such that the benefits were not convincing. This Member also considered that P204 would introduce volatility and uncertainty into the market. One Panel Member considered that the complexity of the proposal might act as a barrier to new entrants, thereby negatively impacting Objective (c).

Applicable BSC Objective (d) – Promoting efficiency in the implementation and administration of the balancing and settlement arrangements

Many Panel Members believed that the complexity of the P204 solution would not better facilitate the achievement of Applicable BSC Objective (d). Some Members commented that they found P204 difficult to understand and to explain to participants, but clarified that this was a result of the inherent complexity of the proposal and not due to any deficiency in the Modification Group's analysis or the Assessment Report. One Member believed that P204 would also create uncertainty, and that this would not better facilitate Objective (d). Another Member cited the cost of the solution against Objective (d).

One Panel Member, whilst believing that P204 would increase complexity, believed Objective (d) to be the least significant objective when weighed against the others. Another Panel Member believed that P204 would have a neutral impact on the achievement of Applicable BSC Objective (d).

Summary

On the basis of the above discussions, the Panel therefore agreed a **MAJORITY** provisional recommendation that the Proposed Modification **SHOULD NOT** be made.

6.1.3 Implementation Date

The Panel provisionally agreed with the Group's recommendations regarding the Implementation Date for P204.

6.1.4 Legal Text

The Panel noted the comments which had been made by some members of the Modification Group regarding the legal text, and the majority decision of the Group not to incorporate these suggested changes (see Section 5.3). It also noted BSCCo's view that the text was legally robust and technically correct. The Panel provisionally agreed with the majority view of the Group that the draft legal text delivered the solution for the Proposed Modification as set out in the P204 Assessment Report, and agreed that no changes were required to the text prior to issuing it for the Report Phase consultation.

A Panel Member noted the statement in Section 4.10 of the Assessment Report that the twelve-month implementation timetable for P198, P200, P203 and P204 would allow time for a 'housekeeping' Modification Proposal to be brought forward prior to the Implementation Date, if one of the proposals was approved and it was felt that further minor clarifications to the text were required. BSCCo advised that the majority view of the P204 Modification Group was that the text was sufficiently clear, but that it would seek to raise a housekeeping change if the text proved to cause confusion during implementation. The Panel noted that the remit of such a housekeeping proposal would be limited to non-material clarifications which did not alter the intention of the legal text. A Panel Member queried the vires under which housekeeping changes could be made to legal text during implementation. BSCCo confirmed that the text would legally become part of the Code baseline on the date of the Authority's decision to approve the relevant proposal (twelve months prior to the Implementation Date), and would therefore become subject to the normal change processes from that point.

6.1.5 Interaction with P198, P200 and P203

Although not part of its formal recommendations to the Authority, a majority of Panel Members agreed that it would be useful to indicate a preference between P198, P200, P203 and P204 so that this could be taken into account by the Authority in its decision as to which (if any) of the proposals would best facilitate the achievement of the Applicable BSC Objectives overall. The Panel noted that it had previously expressed a preference between P198, P200 and P203, which had been issued to the Authority prior to its consideration of the P204 Assessment Report. Details of this previous preference can be found in the P198, P200 and P203 Modification Reports.

Panel Members were therefore invited to indicate which of the four proposals (now including P204) represented their preferred or 'least worst' option. Of those Panel Member who provided a view, a majority expressed a preference for P203 over the other proposals. One Panel Member expressed a preference for Alternative Modification P198. No Panel Members expressed an overall preference for Proposed Modification P198, Proposed or Alternative Modification P200, or P204. Some Panel Members abstained.

6.2 Results of Report Phase Consultation

13 responses (representing 50 Parties and 2 non-Parties) were received to the P204 Report Phase consultation.

A summary of the consultation responses is provided in Table 3 on the following page. Bracketed numbers show the number of BSC Parties represented by the respondent(s), whilst numbers preceded by a '+' show the number of non-Parties represented. Numbers in **bold** show the majority view.

One respondent (a Party Agent) gave a neutral response to all of the consultation questions, since P204 would have no impact on any Party Agents. Some respondents did not comment on the Implementation Date and/or the draft legal text, and the summary table therefore shows only the views of those respondents who did provide comments in respect of Questions 2 and 3. Note that not all Parties who had previously responded to the P204 Assessment Procedure consultation responded to the Report Phase consultation.

Full copies of the consultation responses can be found in Appendix 5.

Table 3 – Responses to Report Phase Consultation

Q	Consultation question	Yes	No	Neutral
Q1	Do you agree with the Panel's provisional recommendation to the Authority contained in the draft Modification Report that Proposed Modification P204 should not be made?	**7 (31 +1)**	4 (18)	2 (1+1)
Q2	Do you agree with the Panel's provisional recommendation concerning the Implementation Date for P204?	**10 (48+1)**	1(1)	1 (0+1)
Q3	Do you agree with the Panel's view that the legal text provided in the draft Modification Report delivers the solution agreed by the Modification Group?	**9 (48)**	(0)	1 (0+1)

6.2.1 Applicable BSC Objectives

A **majority** of respondents to the Report Phase consultation agreed with the Panel's provisional recommendation that P204 should not be made, since they believed that P204 would not better facilitate the achievement of the Applicable BSC Objectives compared with the existing Code baseline. A minority of respondents disagreed with the Panel's provisional recommendation, and believed that P204 would better facilitate the Applicable BSC Objectives. In addition, a minority of respondents expressed a neutral view.

The arguments expressed by respondents in this area were generally consistent with those previously expressed during the P204 Assessment Procedure consultation (as set out in detail within the P204 Assessment Report and as referenced within Section 6.1.1 of this Modification Report), although respondents tended to provide less detail in support of these arguments in their Report Phase consultation responses compared with those submitted during the Assessment Procedure.

However, the following new arguments were raised by respondents in respect of the Applicable BSC Objectives:

- Two respondents noted the Panel's concern regarding the perceived complexity of P204. One of these respondents believed that, although P204 might be perceived as complex, this did not mean that it was not the 'right thing' to do. The other respondent did not believe that P204 was any significantly more complex than P198, P200 or P203. In addition, they felt that the principle of P204 was straightforward (i.e. that P204 allocates losses zonally based on marginal loss factors calculated from a load flow model, and scales these factors such that no BM Unit receives payment for losses).
- One respondent quoted National Grid's recently published document 'Charging Condition 2 Final Report', which contained the view that a TNUoS methodology where the locational signal was based largely on historic commitments would not result in efficient investment or be cost reflective of future investment. This respondent noted that this view had been expressed in the context of the TNUoS Charging Methodology, but believed that it would also be applicable to a zonal transmission losses scheme.

- One respondent who was neutral on whether P204 better facilitated the Applicable BSC Objectives provided a slightly different rationale for their view, compared with their previous consultation response and their Transmission Company analysis during the Assessment Procedure (see Appendix 3). This respondent provided the following views in their Report Phase response:

  - Although the respondent believed that in principle a zonal transmission losses scheme could reduce losses, they stated that there must be confidence in the methodology. The respondent argued that the allocation of losses must be accurate, or its effect on the merit order would not reduce overall losses. Furthermore, they believed that the additional cost and complexity of the new system must not negate the benefits of the overall reduction in losses.

  - The respondent believed that the cost-benefit analysis showed the difficulties in producing accurate ex-ante TLFs, especially when using the snap-shot modelling approach. Due to what they perceived as the inherent difficulties in assessing whether TLFs were an accurate reflection of Parties' contribution to losses, the respondent stated that they were therefore unable to offer an opinion as to whether P204 would better facilitate the achievement of Applicable BSC Objectives (b) and (c) compared with the existing Code baseline.

  - With reference to the cost-benefit analysis, the respondent noted the difficulty in attempting to forecast whether P204 would have a long-term effect on the location of generation. The respondent believed that the proposal would only provide a cost-benefit if losses were reduced, and believed that the volatility of the year-on-year forecast benefit was influenced by the modelling assumptions regarding the respective generation patterns of a very limited number of marginal units. The respondent stated that they were unable to comment on whether the incentives of the scheme would be sufficient to accomplish this, or whether other commercial drivers had been correctly and fully modelled within the cost-benefit analysis. They noted that a large proportion of the cost-benefit occurred in only two years of the study period, as the result of a larger forecast movement of marginal generation in those years.

6.2.2 Implementation Date

All but one respondent who commented in this area supported the Implementation Date provisionally proposed by the Panel. This respondent disagreed with the proposed implementation approach for the reasons previously set out in their response to the Assessment Procedure consultation (i.e. their belief that implementation timescales should reflect its' customers contracts which have a 3-year duration).

One respondent reiterated their view that it would have been prudent to factor in the possibility of a legal challenge. This view had previously been considered by the Modification Group and the Panel during the Assessment Procedure, where it was agreed that additional lead-time was not required since the Code allows further 'fall-back' Implementation Dates to be put forward in the event of a legal challenge (see Section 6.1.1 above). Another respondent who agreed with the Implementation Date stated that, in the event of any appeal, they assumed that the Implementation Date would be revisited as required.

6.2.3 Legal Text

All respondents who commented on the draft legal text believed that it delivered the solution agreed by the Modification Group.

One respondent, whilst agreeing that the text delivered the solution, felt that additional clarity in certain areas of the text would have been beneficial to avoid potential misunderstanding by new readers. However, the respondent considered that these areas were unlikely to lead to legal dispute (for further detail regarding the areas concerned please refer to Section 4.10 of the P204 Assessment Report in Appendix 3). Another respondent agreed with the text, but noted that some Modification Group members had expressed concerns over the clarity of certain elements of the drafting. This respondent therefore supported BSCCo's suggestion of a 'housekeeping' Modification Proposal, should the text prove to cause confusion during

implementation. This respondent believed that this approach would allow the identical elements of the legal text for P198, P200, P203 and P204 to be altered if any one of them were approved.

6.2.4 Further Comments

Many respondents indicated which of P198, P200, P203 and P204 they believed to represent the 'best' or 'least worst' proposal – with a majority expressing an overall preference for P204, and a minority preference for P203.

One respondent noted that a number of Panel Members, during the consideration of the P204 Assessment Report, had not indicated an overall preference out of all the transmission losses proposals – although they had expressed a preference between P198, P200 and P203 at previous Panel meetings. This respondent believed it would be helpful to the industry and to the Authority if Members did indicate a preferred or 'least-worst' option, as abstaining at this point would have the potential to give an inappropriate signal to the Authority regarding the preferences of industry and the Panel.

6.3 Panel's Consideration of Draft Modification Report

[This section to be completed following the Panel's consideration of the draft Modification Report at its meeting on 9 November 2006]

6.4 Panel's Final Recommendation to the Authority

[This section to be completed following the Panel's consideration of the draft Modification Report at its meeting on 9 November 2006]

7 TERMS USED IN THIS DOCUMENT

Other acronyms and defined terms take the meanings defined in Section X of the Code.

Acronym / Term	Definition
Ex-ante	Based on forecast data (i.e. values determined in advance of their period of applicability).
Scaling Factor (β)	The factor to be used in adjusting the Seasonal Zonal TLF instead of the 0.5 scaling factor value (employed in P198, P200 and P203).
Transmission losses	The energy lost from the Transmission System (calculated as the difference between total generation and total demand).
Transmission Losses Adjustment (TLMO)	The parameter for allocating an amount of transmission losses uniformly in proportion to volume independent of location to all BM Units or zones rather than specifically to individual BM Units or zones.
Transmission Loss Factor (TLF)	The parameter for allocating some or all transmission losses on a non-uniform basis (dependent on location as well as volume), and which is currently set to zero.
Transmission Loss Multiplier (TLM)	The factor used to scale individual BM Unit Metered Volumes in Settlement in order to allocate transmission losses to Parties (includes TLF and TLMO).
Variable losses	The element of transmission losses which occurs through the heating of transmission lines, cables and transformers, and which increases with the current (and associated power flow) and length of line in which it flows.

8 DOCUMENT CONTROL

8.1 Authorities

Version	Date	Author	Reviewer	Reason for Review
0.1	16/10/06	Justin Andrews	Kathryn Coffin	For technical review
0.2	18/10/06	Kathryn Coffin	David Jones, Justin Andrews	For quality review
0.3	19/10/06	Justin Andrews	Interested parties	For consultation
0.4	30/10/06	Justin Andrews	Kathryn Coffin	For technical review
0.5	30/10/06	Justin Andrews	David Jones	For quality review
0.6	03/11/06	Change Delivery	BSC Panel	For Panel decision
1.0	dd/mm/yy	BSC Panel	Ofgem	For Authority Decision

8.2 References

Ref.	Document Title	Owner	Issue Date	Version
1	P200 Modification Report, P200 Modification Proposal.	BSCCo	22/09/06	1.0
2	P203 Modification Report, P203 Modification Proposal.	BSCCo	22/09/06	1.0

8.3 Intellectual Property Rights, Copyright and Disclaimer

APPENDIX 1: LEGAL TEXT

Draft legal text for the Proposed Modification is attached as a separate document, Attachment 1A.

APPENDIX 2: PROCESS FOLLOWED

Copies of all documents referred to in the table below can be found on the BSC Website at: P204 Modification Proposal.

Date	Event
03/07/06	Modification Proposal raised by British Energy Power and Energy Trading Ltd
13/07/06	IWA presented to the Panel
14/07/06	First Assessment Procedure Modification Group meeting held
01/08/06	Second Assessment Procedure Modification Group meeting held
02/08/06	External cost-benefit analysis commenced (OXERA)
11/08/06	Requirements Specification issued for BSC Agent impact assessment. Request for BSCCo, Party/Party Agent impact assessments and Transmission Company analysis issued
22/08/06	BSCCo, BSC Agent and Party/Party Agent impact assessment, Transmission Company analysis response and external cost-benefit analysis returned
23/08/06	Third Assessment Procedure Modification Group meeting held
24/08/06	Further external cost-benefit analysis commenced (OXERA)
04/09/06	Assessment Procedure consultation issued
12/09/06	Further external cost-benefit analysis returned
13/09/06	Addendum to Assessment Procedure consultation issued
14/09/06	Progress update given to BSC Panel
18/09/06	Responses received to Assessment Procedure consultation
20/09/06	Fourth Assessment Procedure Modification Group meeting held
12/10/06	Assessment Report presented to the Panel
19/10/06	Report Phase consultation issued
27/10/06	Report Phase consultation responses returned
09/11/06	Draft Modification Report presented to Panel
dd/mm/yy	Final Modification Report issued to Authority

ESTIMATED COSTS OF PROGRESSING MODIFICATION PROPOSAL[9]

Meeting Cost	£3,000 (based on sharing two meetings with P203)
Legal/Expert Cost	£28,000* (covering external cost benefit analysis)
Impact Assessment Cost	£15,000
ELEXON Resource	75 man days £39,500 (includes requirement for contract staff)

*This has been updated since the Assessment Report to reflect that no external legal support was required for P204.

APPENDIX 3: ASSESSMENT REPORT

The P204 Assessment Report is attached as a separate document, Attachment 3A.

[For the purposes of the Report Phase Consultation and the Panel's consideration of the draft Modification Report, the P204 Assessment Report can be found on the BSC Website at: P204 Modification Proposal.]

The Assessment Report includes:

- The conclusions of the Modification Group regarding the areas set out in the P204 Terms of Reference;
- Details of the Group's membership;
- The full results of the Assessment Procedure impact assessments;
- Full copies of all responses to the Assessment Procedure consultation;
- The full results of the external TLF modelling exercise conducted by PTI;
- The full results of the external cost-benefit analysis conducted by OXERA; and
- A full copy of the P198 Assessment Report attached as an appendix to the P204 Assessment Report.

APPENDIX 4: P198 MODIFICATION REPORT

The P198 Modification Report is attached as a separate document, Attachment 4A.

[For the purposes of the Report Phase Consultation and the Panel's consideration of the draft Modification Report, the P204 Modification Report can be found on the BSC Website at: ELEXON - Modification Proposal P198]

APPENDIX 5: REPORT PHASE CONSULTATION RESPONSES

Full copies of the responses received to the Report Phase consultation are attached as a separate document, Attachment 5A.

[9] Clarification of the meanings of the cost terms in this appendix can be found on the BSC Website at the following link: http://www.elexon.co.uk/documents/Change_and_Implementation/Modifications_Process_-_Related_Documents/Clarification_of_Costs_in_Modification_Procedure_Reports.pdf.