88/009

ASSESSMENT REPORT for Modification Proposal P177 'Removal of Intertrip Provisions from the BSC'

Prepared by: Pricing Standing 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 Pricing Standing Modification Group invites the Panel to;

- **AGREE that the Proposed Modification P177 should not be made;**
- **AGREE a provisional Implementation Date for Proposed Modification P177 of 25 Working Days after an Authority decision;**
- **AGREE that Modification Proposal P177 be submitted to the Report Phase; and**
- **AGREE that the draft Modification Report be issued for consultation and submitted to the Panel Meeting of 10 February 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

CONTENTS TABLE

SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

As far as the Pricing Standing Modification Group has been able to assess the following parties/documents have been identified as being potentially impacted by Modification Proposal P177:

Parties*		Party Agents		BSC Agents		Other Agents	
Suppliers	☒	Data Aggregators	☐	SAA	☐	SMRA	☐
Generators	☒	Data Collectors	☐	FAA	☐	Data Transmission Provider	☐
Licence Exemptable Generators	☒	Meter Operator Agents	☐	BMRA	☐		
Transmission Company	☒	ECVNA	☐	ECVAA	☐		
Interconnector	☒	MVRNA	☐	CDCA	☐		
Distribution System Operators	☐			TAA	☐		
Non-Physical Traders	☐			CRA	☐		
				Teleswitch Agent	☐		
				SVAA	☐		
				BSC Auditor	☐		
				Profile Administrator	☐		
				Certification Agent	☐		
				MIDP	☐		

Sections of the BSC			
A	☐	N	☐
B	☐	O	☐
C	☐	P	☐
D	☐	Q	☒
E	☐	R	☐
F	☐	S	☐
G	☐	T	☐
H	☐	U	☐
I	☐	V	☐
J	☐	W	☐
K	☐	X	☐
L	☐		
M	☐		

Code Subsidiary Documents		Core Industry Documents		BSCCo		Other Documents	
BSC Procedures	☐	Grid Code	☐	Internal Working Procedures	☐	Transmission Licence	☐
Codes of Practice	☐	Supplemental Agreements	☐			System Operator-Transmission Owner Code	☐
BSC Service Descriptions	☐	Ancillary Services Agreements	☐				
Service Lines	☐	Master Registration Agreement	☐				
Data Catalogues	☐	Data Transfer Services Agreement	☐				
Communication Requirements Documents	☐	British Grid Systems Agreement	☐				
Reporting Catalogue	☐	Use of Interconnector Agreement	☐				
MIDS	☐	Settlement Agreement for Scotland	☐				
		Distribution Codes	☐				
		Distribution Use of System Agreements	☐				
		Distribution Connection Agreements	☐				

X = Identified in Report for last Procedure
N = Newly identified in this Report

*P177 would primarily impact those Parties with BM Units directly affected by the operation of an intertrip (i.e. generators at present but potentially Suppliers in the future). However, through its impact on Settlement, P177 would potentially impact indirectly all Parties with Energy Accounts.

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

1.1 Modification Proposal

Modification Proposal P177 'Removal of Intertrip Provisions from the BSC' (P177, Reference 1) was submitted by National Grid Transco ('the Proposer') on 4 October 2004. P177 seeks to remove the existing Balancing and Settlement Code ('BSC') compensation arrangements (i.e. those contained in paragraph Q5.1.5 and the related references) for Parties affected by the operation of an intertrip. P177 is part of a range of changes across several industry documents being proposed by National Grid Transco (NGT) to establish a revised framework for intertrip schemes.

The compensation arrangements in the BSC cover 'Operational Intertrips'. Under the Grid Code (Reference 2), an 'Operational Intertripping Scheme' is defined as follows:

> *"The automatic tripping of circuit-breakers to prevent abnormal system conditions occurring, such as over voltage, overload,* ***System*** *instability, etc. after the tripping of other circuit-breakers following power* ***System*** *fault(s) which includes* ***System*** *to* ***Generating Unit****,* ***System*** *to* ***CCGT Module*** *and* ***System*** *to* ***Demand*** *intertripping scheme."*

In practice, an intertrip is a device that automatically trips a generator (or demand site) off the Transmission System (the 'System') when it receives a specific signal. The signal is delivered if a specific fault on the System occurs. The requirement for an intertrip is usually identified at the time of connection, and is specified within Appendix F3 of the Bilateral Connection Agreement (BCA) between NGT and the connecting party.

Under paragraph Q5.1.5 of the BSC, the operation of an intertrip in the circumstances described by the Grid Code, is treated as a Bid-Offer Acceptance (BOA) in the Balancing Mechanism. Therefore, an intertrip would be remunerated at the prevailing Bid-Offer Price and the volume associated with its operation entered into Settlement through the BOA. P177 proposes to remove this 'compensation' arrangement i.e. a BOA would no longer be issued in relation to the operation of an intertrip.

Background to Proposed Change

The Proposer has raised P177 as part of a wider, cross-governance, set of proposals to establish an enduring framework for arrangements for intertrips. The main focus of the proposed changes is the Connection and Use of System Code (CUSC). CUSC Amendment Proposal 76 'Treatment of System to Generator Intertripping Schemes' ('CAP076', Reference 3) seeks to classify System to Generator Operational Intertripping Schemes and introduce associated compensation mechanisms into the CUSC. P177 represents a complementary change to ensure that duplicate compensation arrangements do not exist following the operation of such an intertrip – i.e. the existing BSC 'compensation' of treating the operation of an operational intertrip as a BOA would be removed such that an affected Party would not receive compensation under both the CUSC and the BSC .

A summary of the changes being proposed to the various industry codes designed to introduce an enduring framework for intertrips going forward was submitted with P177. However, it should be noted that whilst a number of changes are being sought across several governance areas, the change to the BSC proposed under P177 does not in itself require changes to other industry documents.

In raising P177, the Proposer noted two statements made by the Authority in its Modification Proposal P87 'Removal of Market Risk Associated with the Operation of a Generator Inter-trip Scheme' (P87, Reference 4) Decision Letter (Reference 4):

> *"…the BSC is not the right forum for consideration of an issue that relates to the terms for transmission access."*

"…compensation for operational intertrips should be considered under the CUSC or Charging Methodology governance arrangements rather than under the BSC. This is because it relates to terms for transmission access rather than the details of the electricity trading arrangements."

The Proposer considers compensation for the operation of an intertrip to be an issue relating to transmission access, and notes the statement made by the Authority in the P87 Decision Letter as to the appropriate governance arrangements for the treatment of access issues.

Experience of Intertrips Operating

No Operational Intertripping Schemes that would be treated as a BOA under the existing BSC provisions have 'fired' (i.e. operated) since NETA Go-Live (i.e. 27 March 2001).

Process Followed

ELEXON presented an Initial Written Assessment (IWA) of P177 (Reference 6) to the Balancing & Settlement Code Panel ('the Panel') at its meeting on 14 October 2004. The Panel agreed with the recommendation that P177 be submitted to a three-month Assessment Procedure to be carried out by the Pricing Standing Modification Group (PSMG).

During the Assessment Procedure, the PSMG met twice – once on 27 October 2004 and once on 7 December 2004. To support its assessment of P177 against the Applicable BSC Objectives, the PSMG produced and issued a consultation document to interested parties.

1.2 Issues raised by the Proposed Modification

In accordance with its Terms of Reference (see Annex 2), the PSMG has considered the following issues during the P177 Assessment Procedure:

- Impact on Settlement
- Interaction with Modification Proposal P175; and
- Interaction with CAP076.

The following subsections document the discussions and the conclusions of the PSMG on each of the above issues.

1.2.1 Impact on Settlement

The PSMG identified and considered two areas of impact on Settlement:

(a) Energy Imbalance Prices & Market Length; and

(b) Impact on the Energy Imbalance Volume of the affected Party

In this section, the impact on Settlement of treating the operation of an intertrip according to the current baseline and according to P177 is compared.

The PSMG noted that assessment of these impacts will differ depending on the extent to which the associated changes proposed to other industry documents are considered. Therefore, further sections have been included in which the impact of P177 on Settlement, assuming that complementary changes to the Balancing Services Adjustment Data (BSAD) Methodology Statement (Reference 7) and Applicable Balancing Services Volume Data (ABSVD) Methodology Statement (Reference 8) have been made, is considered. The changes assumed to these documents are highlighted in the relevant sections.

However, whilst sought as part of a coherent package of changes, the PSMG acknowledged that P177 needed to be assessed alone and against the current BSC baseline. Therefore, sections in which the assumption of a BSAD or ABSVD Methodology Statement change have been made *are in italics* to

emphasise that they have been included for illustrative purposes only and have not been factored into the PSMG's initial assessment of P177 against the Applicable BSC Objectives.

1.2.1.1 Energy Imbalance Prices & Market Length

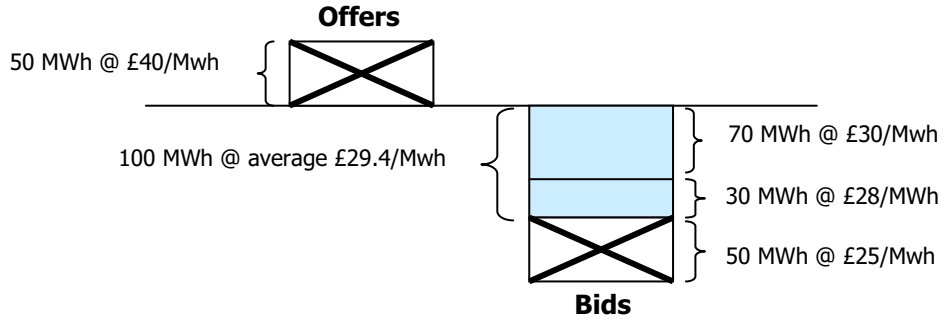
The PSMG has assessed the impact of P177 on Energy Imbalance Prices and market length through two worked examples: (1) one based on a scenario in which the market was 'long' when the intertrip was operated and (2) another based on a scenario in which the market was 'short' when the intertrip was operated. In each example, the impact of an intertrip under the current BSC Baseline is compared to the impact of an intertrip under P177. In addition, the impact of an intertrip under P177 where complementary changes have been made to the BSAD Methodology Statement is provided for illustrative purposes.

Scenario 1: Impact on a Long Market

Under this scenario, the market is assumed to be 100MWh 'long'.

Scenario 1a: Market Long & No Intertrip

In this variant of the scenario, no intertrip has been operated. The diagram below illustrates the actions of the System Operator (SO) and their impact on market length and Energy Imbalance Prices.

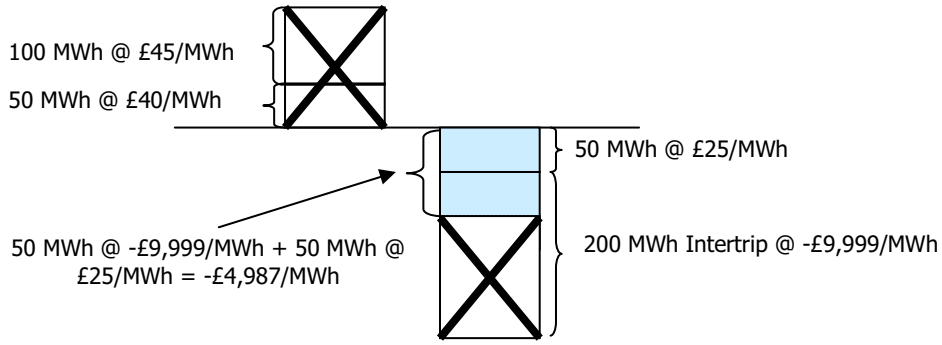


- SO takes 50MWh of Offers and 50MWh of Bids for 'System' purposes
- SO takes 100 MWh of Bids to balance the System
- Net Imbalance Volume (NIV) Tagging removes 50 MWh of Offers and 50 MWh of Bids
- **Market 'long' & Main Price SSP = £29.4 (i.e. 30x0.7+28x0.3)**

In this circumstance, the PSMG noted that the cost of the Bids deemed to be delivered for balancing purposes is reflected in the resulting Energy Imbalance Price.

Scenario 1b: Market Long & Intertrip Treated According to Current BSC Baseline

In this variant of the scenario, an intertrip taking 200MWh off the System has been operated and that intertrip is treated according to the current BSC baseline for the purposes of Settlement (i.e. a BOA is issued). The diagram overleaf illustrates the actions of the SO and their impact on market length and Energy Imbalance Prices in this circumstance.

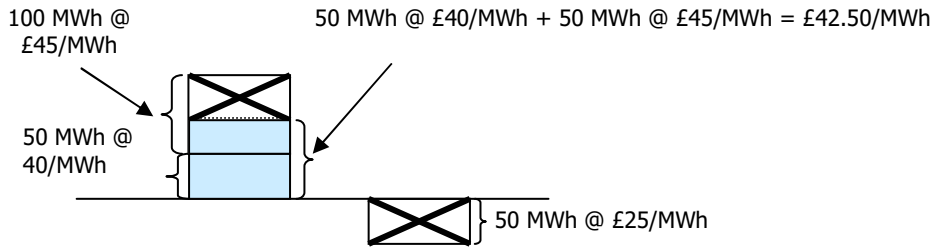


- SO issues BOA for 200 MWh (at prevailing Bid price -£9,999/MWh) to affected Party
- SO takes 50 MWh of Bids & 50 MWh of Offers for 'System' purposes
- SO takes 100 MWh of Offers to balance System
- NIV Tagging removes 150 MWh of Offers and 150 MWh of Intertrip volume
- **Market 'long' & Main Price SSP = -£4,987 (i.e. -9,999x0.5 + 25x0.5)**

In this circumstance, the PSMG noted that, since a proportion of the volume associated with the intertrip is deemed to have been taken for balancing purposes, the cost of the associated BOA is reflected in the resulting Energy Imbalance Price.

Scenario 1c: Market Long & Intertrip Treated According to P177

In this variant of the scenario, an intertrip taking 200MWh off the System has been operated and that intertrip is treated according to P177 for the purposes of Settlement (i.e. no BOA is issued). The diagram below illustrates the actions of the SO and their impact on market length and Energy Imbalance Prices in this circumstance.



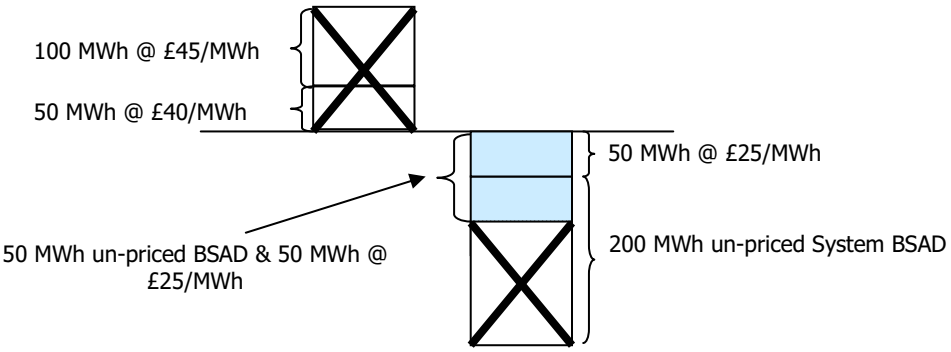
- SO does not issue BOA to affected Party
- Intertrip volume (200 MWh) does not feed into Bid stack
- Intertrip 'flips' market from 'long' (100 MWh) to 'short' (100 MWh)
- SO takes 50 MWh of Bids and 50 MWh of Offers for 'System' purposes
- SO takes 100 MWh of Offers to balance System
- NIV Tagging removes 50 MWh of Offers and 50 MWh of Bids
- **Market flipped to 'short' & Main Price SBP = £42.50 (i.e. 40x0.5 + 45x0.5)**

In this circumstance, the PSMG noted that, since the volume associated with the intertrip does not feed into the Bid 'stack' because a BOA is not issued as per P177, market length is 'flipped' from 'long' to

'short' and the cost of the Offers deemed to have been taken for balancing purposes is reflected in the resulting Energy Imbalance Price.

Scenario 1d: Market Long & Intertrip Treated According to P177 with BSAD Change

In this variant of the scenario, an intertrip taking 200MWh off the System has been operated and is treated according to P177 for the purposes of Settlement. In addition, it has further been assumed that a complementary change has been made to the BSAD Methodology Statement whereby the volume associated with the intertrip is entered into Settlement as un-priced 'system' BSAD. The diagram below illustrates the actions of the SO and their impact on market length and Energy Imbalance Prices in this circumstance.



- SO does not issue BOA to affected Party, but Intertrip volume (200 MWh) feeds into Bid stack as un-priced 'System' BSAD
- SO takes 50 MWh of Bids and 50 MWh of Offers for 'System' purposes
- SO takes 100 MWh of Offers to balance System
- NIV Tagging removes 150 MWh Offers and 150 MWh of BSAD Volume
- **Market 'long' & Main Price SSP (BSAD vol. not incl. in calculation) = £25.00**

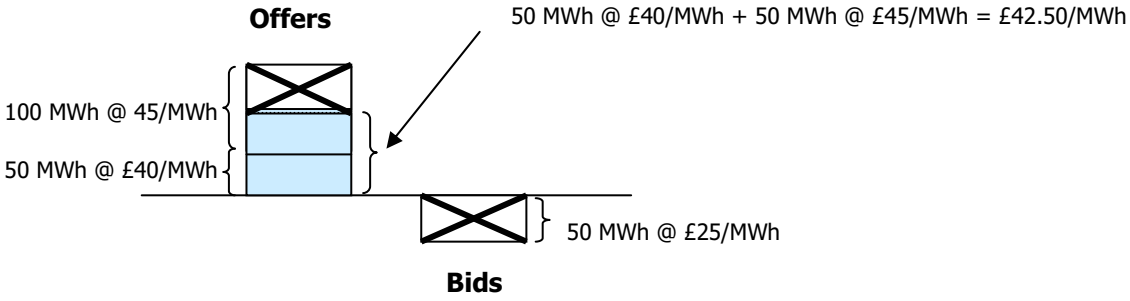
In this circumstance, the PSMG noted that, although a BOA is not issued, the volume associated with the intertrip is fed into the Bid stack as un-priced 'System' BSAD. As a consequence, operation of the intertrip does not 'flip' the market and doe not effect the calculation of the Energy Imbalance Price which is set by the Bids deemed to have been taken for balancing purposes (i.e. as per scenario 1a).

Scenario 2: Impact on a Short Market

Under this scenario, the market is assumed to be 100MWh 'short'.

Scenario 2a: Market Short & No Intertrip

In this variant of the scenario, no intertrip has been operated. The diagram overleaf illustrates the actions of the System Operator (SO) and their impact on market length and Energy Imbalance Prices.

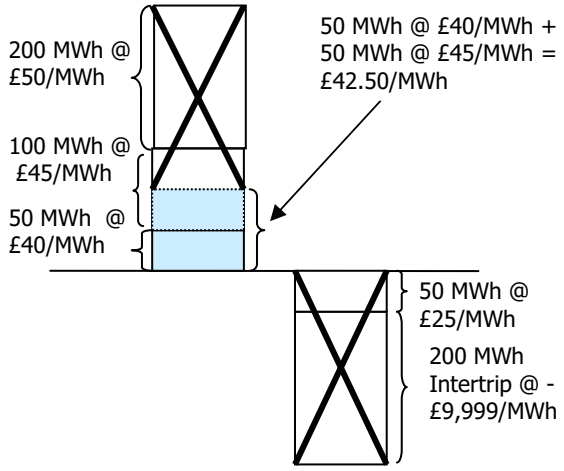


- SO takes 50 MWh of Offer and 50 MWh of Bids for 'System' purposes
- SO takes 100 MWh of Offers to balance System
- NIV Tagging removes 50 MWh of Bids and 50 MWh of Offers
- **Market 'short' & Main Price SBP = £42.50 (i.e. 40x0.5 + 45x0.5)**

In this circumstance, the PSMG noted that the cost of the Offers deemed to have been taken for balancing purposes is reflected in the resulting Energy Imbalance Price.

Scenario 2b: Market Short & Intertrip Treated According to Current BSC Baseline

In this variant of the scenario, an intertrip taking 200MWh off the System has been operated and that intertrip is treated according to the current BSC baseline for the purposes of Settlement (i.e. a BOA is issued). The diagram below illustrates the actions of the SO and their impact on market length and Energy Imbalance Prices in this circumstance.

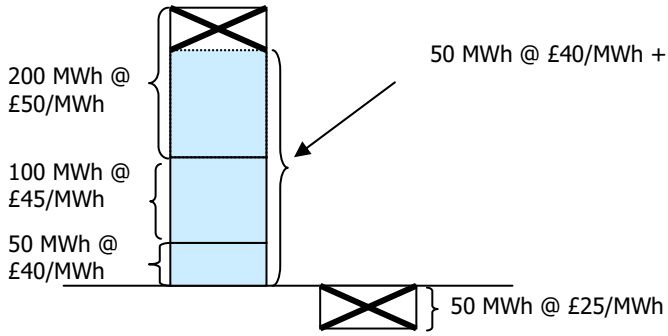


- SO issues BOA for 200 MWh (at prevailing Bid price - £9,999/MWh) to affected Party
- SO takes 50 MWh of Bids and 50 MWh of Offers for 'System' purposes
- SO takes 300 MWh of Offers to balance System
- NIV Tagging removes 250 MWh of Offers and 250 MWh of Bids
- **Market 'short' & Main Price SBP = £42.50 (i.e. 40x0.5 + 45x0.5)**

In these circumstances the PSMG noted that the BOA associated with intertrip is tagged out and the resulting Energy Imbalance Price is set by the Offers which have been deemed to have been taken for balancing purposes (i.e. as per scenario 2a).

Scenario 2c: Market Short & Intertrip Treated According to P177

In this variant of the scenario, an intertrip taking 200MWh off the System has been operated and that intertrip is treated according to P177 for the purposes of Settlement (i.e. no BOA is issued). The diagram overleaf illustrates the actions of the SO and their impact on market length and Energy Imbalance Prices in this circumstance.

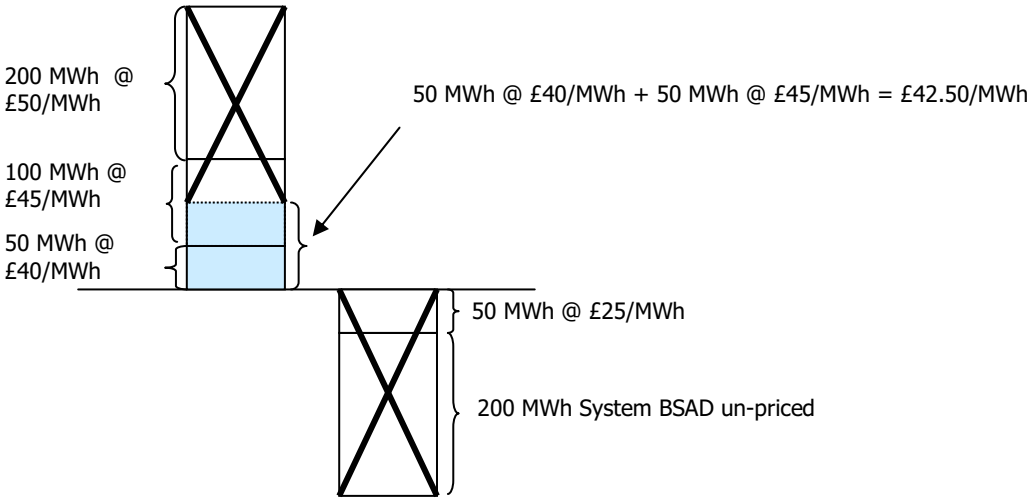


- SO does not issue BOA to affected Party
- Intertrip volume (200 MWh) does not feed into Bid stack
- SO takes 50 MWh of Bids and of 50 MWh Offers for 'System' purposes
- SO takes 300 MWh of Offers to balance System
- NIV Tagging removes 50 MWh of Offers and 50 MWh of Bids
- **Market is 'short' & Main Price SBP = £46.67 (i.e. 40x(1/6)+ 45x(2/6) + 50x3/6))**

In this circumstance, the PSMG noted that, because no BOA is issued in relation to the intertrip, less Bids and Offers are tagged out and as a result the Energy Imbalance Price is set by the higher priced Offers which have been deemed to have been taken for balancing purposes. Therefore, this scenario results in a higher SBP than under scenarios 2a and 2b.

Scenario 2d: Market Short & Intertrip Treated According to P177 with BSAD Change

In this variant of the scenario, an intertrip taking 200MWh off the System has been operated and is treated according to P177 for the purposes of Settlement. In addition, it has further been assumed that a complementary change has been made to the BSAD Methodology Statement whereby the volume associated with the intertrip is entered into Settlement as un-priced 'System' BSAD. The diagram overleaf illustrates the actions of the SO and their impact on market length and Energy Imbalance Prices in this circumstance.



- SO does not issue BOA to affected Party, but Intertrip volume (200 MWh) feeds into Bid stack as un-priced 'System' BSAD
- SO takes 50 MWh of Bids and of 50 MWh Offers for 'System' purposes
- SO takes 300 MWh of Offers to balance System
- NIV tagging removes 250 MWh of Offers and 250 MWh of Bids
- **Market 'short' & Main Price SBP = £42.50 (i.e. 40x0.5 + 45x0.5)**

In this circumstance, the PSMG noted that, whilst no BOA is issued in relation to the intertrip, the volume associated with the intertrip fees into the Bid 'stack' as un-priced System BSAD. As a consequence, the higher priced Offers are tagged out by the un-priced BSAD Volume and the Energy Imbalance Prices are set by the Offers which have been deemed to have been taken for balancing purposes (i.e. as per scenarios 2a and 2b).

Conclusions

On the basis of the foregoing analysis, the PSMG has made the following observations regarding the impact of P177, as compared to the current Baseline, on market length and Energy Imbalance Prices under:

- Where the market is 'long', P177 would remove the exposure of market to Energy Imbalance Prices Energy Imbalance Prices influenced by 'sleeper bids' of plant tripped off the System;
- Where the market is 'long' P177, would either (1) reduce SSP or (2) 'flip' the market from 'long' to 'short' thus making SBP the main price; and
- Where the market is 'short', P177 would increase SBP.

In addition, the PSMG noted that, were complementary BSAD changes introduced in conjunction with P177, the following affects of P177 would be removed:

- *Where the market is 'long', the impact on market length would be removed; and*
- *Where the market is 'short', the impact on market length and SBP would be removed.*

However, the PSMG noted that changes to BSAD were outside the scope of the BSC and thus outside the scope of the P177 Assessment Procedure for the purposes of assessing the proposal against the Applicable BSC Objectives.

1.2.1.2 Energy Imbalance Volume of Affected Party

The PSMG noted that under Section T4 of the BSC, volumes associated with BOAs and Applicable Balancing Services are factored into the determination of a Party's Energy Imbalance Volume through three equations as follows[2]:

(a) Calculation of Balancing Services Volume

For each Settlement Period, for each BM Unit, the 'Period BM Unit Balancing Services Volume' is determined as follows:

$$\mathbf{QBS_{ij} = \sum^{n} (QAO^{n}{}_{ij} + QAB^{n}{}_{ij}) + QAS_{ij}}$$

Where:

$\sum^{n}$ represents the sum over all Bid-Offer Pair Numbers for the BM Unit

$QAO^{n}{}_{ij}$ represents the total MWh volume of all Offer Acceptances

$QAB^{n}{}_{ij}$ represents the total MWh volume of all Bid Acceptances

QAS_{ij} represents the MWh volume of ABSVD

Therefore, the Balancing Services Volume incorporates volumes associated BOAs issued in respect of a BM Unit and any ABSVD submitted in respect of a BM Unit by the Transmission Company.

(b) Scaling of Balancing Services Volume for Transmission Losses

The Balancing Services Volumes (i.e. BOAs + ABSVD) are subsequently aggregated at the Energy Account Level and scaled to account for transmission losses. For each Settlement Period, for each Energy Account, the Account Period Balancing Services Volume is determined as follows:

$$\mathbf{QABS_{aj} = \sum i QBS_{ij} * TLM_{ij}}$$

Where:

$\sum_i$ represents the sum over all BM Units for the Lead Party's Energy Account

TLM_{ij} represents the Transmission Loss Multiplier applied to a BM Unit in a given Settlement Period

(c) Calculation of Energy Imbalance Volume

An Energy Imbalance Volume is calculated for each Energy Account that a Party holds. In respect of each Settlement Period, for each Energy Account, the 'Account Energy Imbalance Volume' is determined as follows:

$$\mathbf{QAEI_{aj} = QACE_{aj} - QABS_{aj} - QABC_{aj}}$$

Where:

$QABC_{aj}$ represents the Account Bilateral Contract Volume in MWh

$QACE_{aj}$ represents the Account Credited Energy Volume in MWh

Therefore, in respect of each of its Energy Accounts, a Party's Energy Imbalance Volume is calculated as the difference between its Credited Energy Volume (which is based on Metered Volumes) and its contracted volume as modified by its Balancing Services Volume.

[2] Note that throughout this the subscripts used as those defined in Table X-1 of the BSC – i.e. 'a' = Energy Account, 'i'= BM Unit, 'j' = Settlement Period and 'n' =Bid-Offer Pair Number.

Worked Example

Assume that as a result of the operation of an intertrip by the Transmission Company, Party X has a BM Unit Y, generating at a level £100MWh, tripped of the System during Settlement Period Z. Furthermore, BM Unit Y was contracted to generate 100 MWh during Settlement Period Z[3].

The following three sub-sections illustrate the impact of this example intertrip on the Energy Imbalance position of Party X's Energy Account A under three different scenarios:

(a) Current BSC Baseline;

(b) P177; and

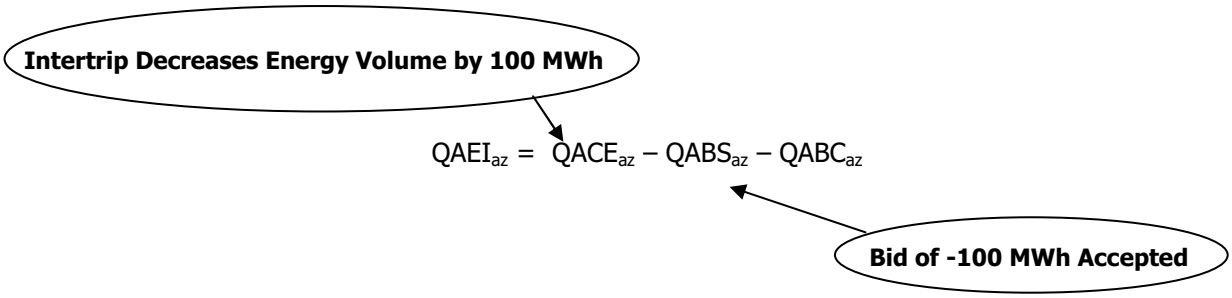
(c) P177 plus change to ABSVD Methodology.

Under the third scenario, it has been assumed that, in addition to P177, complementary changes have been made to the ABSVD Methodology Statement (Reference 8). It has been assumed that the ABSVD Methodology Statement has been changed such that the volumes associated with the operation of an intertrip are included in ABSVD submitted by the Transmission Company.

Note, as with potential BSAD Methodology changes in the previous section, this third scenario has been included in italics to emphasise that it is for illustrative purposes only.

Scenario (a): Intertrip under BSC Current Baseline

Under the current BSC baseline, a compensatory BOA (i.e. a notional Bid of 100 MWh) would be issued post-event by the Transmission Company in relation to BM Unit Y to offset the discrepancy introduced by the intertrip between Party X's Credited Energy Volume and its contracted volume. Therefore, Party X's Energy Imbalance position would be unaffected by the intertrip for the duration of Settlement Period Z. This is illustrated by the diagram below in which changes as a result of the intertrip are highlighted:

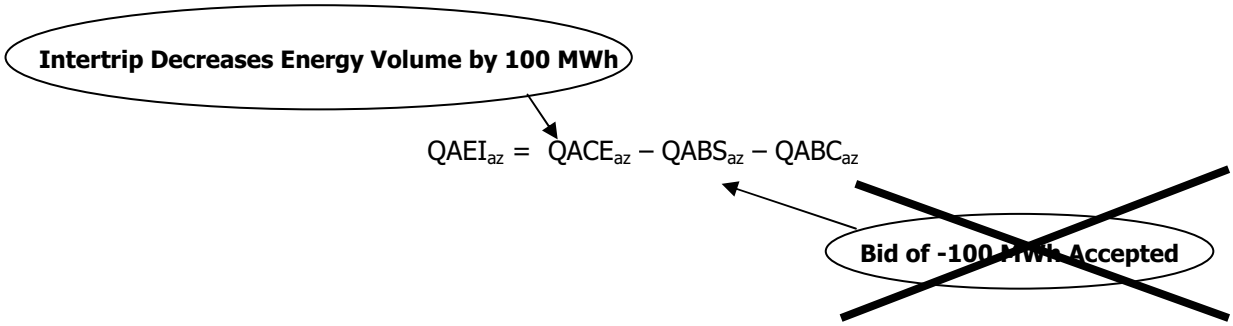


Note that, under the current BSC baseline (see section Q5.1.5), a compensatory BOA would only be issued for the Settlement Period (and associated Balancing Mechanism window where applicable) in which the intertrip was operated. Therefore, the affected Party would potentially be exposed to consequential imbalance in subsequent Settlement Periods (i.e. 'beyond the wall') and would need to trade out of their position to manage any such exposure.

Scenario (b): Intertrip under P177

Under P177, a compensatory BOA (i.e. for a notional Bid of 100 MWh) would no longer be issued post-event by the Transmission Company to BM Unit Y to offset the discrepancy introduced by the intertrip between Party X's credited energy volume and its contracted volume. This is illustrated by the diagram overleaf in which changes as a result of the intertrip are highlighted:

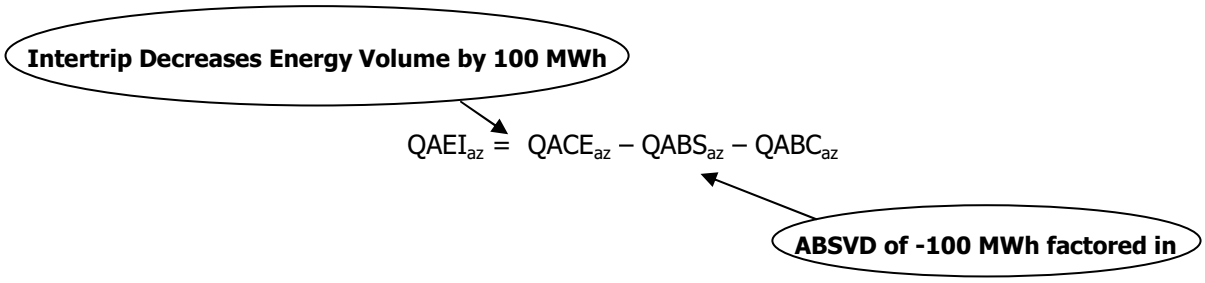
[3] For the purposes of this worked example it is assumed that the Transmission Loss Multiplier (TLM) is one (i.e. TLM = 1).



Therefore, under P177, Party X's Energy Imbalance Volume would be affected by the intertrip – i.e. a compensatory volume would not be included in the Balancing Services Volume, resulting in a discrepancy between Party X's Credited Energy Volume and its contracted volume. In addition, as above, Party X would also potentially be exposed to consequential imbalance in subsequent Settlement Periods (i.e. 'beyond the wall') and would need to trade out of their position to manage any such exposure.

Scenario (c): Intertrip under P177 with Change to ABSVD Methodology

Under a scenario where P177 has been implemented and complementary changes have been made to the ABSVD Methodology Statement to take account of intertrip volumes, ABSVD would be manipulated post-event for BM Unit Y to offset the discrepancy introduced by the intertrip between Party X's Credited Energy Volume and its contracted volume. Therefore, as under Scenario (a), Party X's Energy Imbalance position would be unaffected by the intertrip for the duration of Settlement Period Z. This is illustrated by the diagram below in which changes as a result of the intertrip are highlighted:



Note that in the above scenario it has been assumed that compensatory ABSVD would only be issued in relation to the affected Party for the Settlement Period (and associated Balancing Mechanism window where applicable) in which the intertrip was operated. Therefore, as under Scenario (a), the affected Party would potentially be exposed to consequential imbalance in subsequent Settlement Periods.

However, there is the possibility that the complementary changes being proposed to the ABSVD Methodology Statement as part of the cross-governance package of proposals for the treatment of intertrips could include compensatory ABSVD for imbalance incurred 'beyond the wall'. One PSMG member noted that this may remove the incentive for Parties affected by an intertrip to trade out of any consequential imbalance 'beyond the wall' and that this might have negative consequences.

Conclusions

The PSMG concluded that P177 would have a negative impact on the Energy Imbalance Volume of a Party affected by an intertrip – i.e. that Party would be exposed to the prevailing Energy Imbalances both for the Settlement Period in question and potentially for several Settlement Periods 'beyond the

wall' (depending on the dynamics of the plant in question and the ability of the Party to trade out of its position).

In contrast, were complementary ABSVD changes made in conjunction with P177, an intertrip would not impact a Party's Energy Imbalance Volume. However, the PSMG noted that ABSVD changes were outside the scope of the Assessment Procedure in terms of assessing P177 against the Applicable BSC Objectives.

1.2.1.3 Impact on Behaviour 'Beyond the Wall'

One member of the PSMG modelled the potential impact of P177 on Energy Imbalance Prices 'beyond the wall' (i.e. in Settlement Periods following the one in which an intertrip is operated) and presented the resulting analysis to the rest of the Modification Group.

The modelling seeks to illustrate the impact of P177 on the affected Party's incentives, market length and the resulting impact on Energy Imbalance Prices under a number of different Scenarios. A copy of the model and associated analysis is attached as Annex 7.

The modelling highlights the potential impact of P177 on imbalances during a Balancing Mechanism window and for four Settlement Periods 'beyond the wall' under various different scenarios (i.e. system long/short/very long) with the current baseline (no BSAD or ADSVD adjustments), BSAD adjustments only and BSAD and ABSVD adjustments. The following outcomes can be observed:

- Under the current baseline, Parties have an incentive to 'trade out' imbalances beyond the wall. This is consistent with the Authority's decisions on Modification Proposal P80 'Deemed Bid/Offer Acceptance for Transmission System Faults' (P80, Reference 9) and P87 regarding imbalances arising from system faults and intertrips beyond the wall. Any costs of imbalances that occur beyond the wall are borne by the Party. However, under normal circumstances submitted Bid prices reflect a Party's assessment of the risk that an Acceptance will not be issued beyond the wall (i.e. a Party can currently mitigate costs of imbalances beyond the wall through Bid prices).
- While BSAD adjustments beyond the wall may correct the initial System imbalance resulting from the loss of the intertripped volume, without complimentary ABSVD adjustments the consequential incentive on Parties to trade out imbalances would subsequently impact both System length and prices.
- A combination of both BSAD and ABSVD adjustments beyond the wall would remove the incentive on a Party to trade out any imbalance (since a Party's imbalance would be transferred to the SO's account). However, since there would be an 'open position' (i.e. an imbalance) on the SO's account, unwinding actions would be required by the SO in order to return the System to balance. The cost of these actions would be borne by all users through BSUoS payments.

The differing outcomes highlighted by the modelling suggest that Bid prices may reflect the risk of Party imbalances beyond the wall. However, the removal of intertrips from the BSC will require changes to the BSAD and ABSVD methodologies in order to reflect the effect of intertrips on Energy Imbalance Prices. Whether these changes impact on imbalances beyond the wall is a matter for the Transmission Company to consider in proposing changes to the BSAD and ABSVD methodologies. However, these changes are beyond the scope of P177.

The PSMG considered the analysis and observed that it suggested that, were complementary changes introduced to the BSAD and ABSVD Methodology Statements to treat the intertripped volume beyond the wall, P177 could result in distortion to Imbalance Prices and a removal of the incentive of an affected Party trade out of any consequential imbalance. Were changes made to the ABSVD Methodology Statement without equivalent changes being made to the BSAD Methodology Statement, there could be a distortion to market length.

1.2.2 Interaction with Modification Proposal P175

Modification Proposal P175 'Development of Provisions related to certain Bid-Offer Acceptances issued pursuant to the Grid Code (e.g. BC2.9 and BC2.10)' (P175, Reference 10) was raised on 1 October 2004 by RWE Trading. P175 seeks to amend the provisions for treatment of Acceptances entered into Settlement as a consequence of operational instructions issued under the Grid Code - including Acceptances issued pursuant to the operation of an intertrip.

The PSMG considered that P175 was incompatible with the intent of P177 – i.e. de-classification of operational intertrips as BOAs and the removal of all compensation arrangements for intertrips from the BSC. However, the PSMG noted that the cost claim process under P175 is compatible with the development of enduring compensation arrangements in other industry codes (e.g. the CUSC under CAP076) – as it would be turned off in that eventuality. Therefore some members of the PSMG considered that, were P175 approved, there would no longer be a need for P177.

Note that the proposed legal text has been drafted such that it would be, as far as possible compatible, with P175.

1.2.3 Interaction with CAP076

P177 has been submitted as a consequential change required to the BSC in the event of CAP076 being approved by the Authority. The PSMG noted that were CAP076 approved and the existing BSC compensation arrangements not removed, the operation of an intertrip would be subject to two compensation mechanisms – one in the BSC and one in the CUSC. Therefore, the PSMG concluded that the Implementation Date proposed for P177 should be such that it enables the Authority to direct simultaneous changes to the BSC and the CUSC so as to avoid this potential scenario.

In addition, the PSMG noted that CAP076 proposes compensation arrangements for System to Generator intertripping schemes, but does not address other types of operational intertripping schemes – e.g. System to Demand intertripping schemes. Therefore were both CAP076 and P177 approved there might still exist the possibility that no compensation arrangements would exist for certain categories of intertrip schemes.

For clarification, the PSMG sought feedback through the Transmission Company Analysis as to which categories of intertrip were covered by P177 and which categories by CAP076. See section 7 for details of the feedback provided

1.3 Assessment of Proposed Modification Against Applicable BSC Objectives

The PSMG identified impacts on the achievement of Applicable BSC Objectives (a), (b) and (c). The following subsections summarise the views expressed by the PSMG against each of these objectives.

1.3.1 Applicable BSC Objective (a)

Applicable BSC Objective (a) is as follows:

> *"The efficient discharge by the Transmission Company of the obligations imposed under the Transmission Licence."*

The Proposer was of the opinion that P177 would have a positive impact on achievement of this objective. The Proposer noted that, under its licence, the Transmission Company has an obligation to have in force:

> (1) a BSC (setting out the balancing and settlement arrangements for electricity delivered to or taken off the System); and

(2) a CUSC (setting out arrangements for access to and use of the System).

As a consequence, the Proposer believed that the removal of arrangements for intertripping, an action resulting in the removal of access to the System, from the BSC would better reflect the intended remits of these two industry codes as set out in the Transmission Licence.

However, the majority of the PSMG members remained unconvinced by this view. These members noted that the operation of intertrips may result in consequential balancing actions and as a result are legitimate subject matter for the BSC. Therefore, P177 would not unambiguously better facilitate achievement of Applicable BSC Objective (a).

1.3.2 Applicable BSC Objective (b)

Applicable BSC Objective (b) is as follows:

> *"The efficient, economic and co-ordinated operation by the Transmission Company of the Transmission System."*

The Proposer believed that, should CAP076 be approved, P177 would have a positive impact on achievement of this objective. Providing payment through a BOA for the automatic removal of access to the System when that loss of access has already been compensated under another governance framework would be inefficient and uneconomic.

However, the majority of the PSMG members expressed the view that, as P177 had to be considered against the current BSC baseline and without making assumptions about complimentary changes to other governance arrangements, P177 would have a negative impact on the achievement of this objective. These members were of the opinion that P177's potential to distort Energy imbalance Prices and flip the market from being 'long' to being 'short' would send erroneous signals to the market and thus undermine the System Operator's ability to manage the System in an efficient manner.

1.3.3 Applicable BSC Objective (c)

Applicable BSC Objective (c) is as follows:

> *"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 believed that, should CAP076 be approved, P177 would have a positive impact on achievement of this objective. The current arrangements result in Parties with intertrip agreements factoring the cost and potential risk of an intertrip operating into their Bid prices. This has the potential to distort the prices submitted into the Balancing Mechanism and creates a risk of unpredictable and high negative Bid prices feeding into Energy Imbalance Price calculations and sending inappropriate signals to the market in relation to System length. The removal of intertrip compensation arrangements from the BSC would remove the potential for costs associated with the provision of System actions to distort Energy Imbalance Prices. By ensuring that Energy Imbalance Prices remain appropriate should an intertrip operate, effective competition within the Balancing Mechanism would be better facilitated.

The majority of the PSMG, however, believed that P177, considered in isolation from associated changes proposed to other industry documents, would have a negative impact on this objective. These members believed that P177 would undermine competition by: (1) distorting Energy Imbalance Prices and market length and (2) removing compensation for Parties affected by an intertrip and exposing them to imbalance.

One PSMG member was sceptical that P177 would result in a general reduction in Bid prices. This member believed that Parties factor in a wide range of variables when setting Bid prices and that removal of any intertrip risk premium would have minimal impact upon prices available to the System

Operator. The member therefore believed that the Transmission Company assumption in relation to P177's impact upon Bid prices was questionable.

One member of the PSMG noted that the removal of compensation for the operation of an intertrip might constitute an infringement of the affected Party's rights under the European Convention on Human Rights.

1.3.4 Conclusion

The majority of the PSMG concluded that P177, viewed against the current BSC baseline alone (i.e. in isolation from the associated changes proposed to other industry codes), would be detrimental to achievement of Applicable BSC Objective (c). In addition, it was sceptical of the benefits identified by the Proposer in relation to Applicable BSC Objectives (a) and (c).

However, the Proposer remained of the opinion that P177 would better facilitate achievement of the Applicable BSC Objectives. Compared to the current BSC baseline, and considered in isolation of associated changes proposed to other industry documents, P177 would better facilitate achievement of Applicable BSC Objective (a).

1.4 Alternative Modification

No Alternative Modification is presented by the PSMG. However, the PSMG did discuss and consult on the principles of a potential Alternative Modification.

Acknowledging that P177 has been submitted as a consequential change required to the BSC to support the proposed introduction of compensation under other governance arrangements, the PSMG identified two undesirable scenarios relating to the implementation of P177 that might be remedied by an Alternative Modification:

- Scenario 1: P177 is implemented prior to the establishment of a framework for the treatment of intertrips under other governance arrangements; and
- Scenario 2: P177 is implemented and a framework for the treatment of intertrips under other governance arrangements is not established.

Under both these scenarios, a Party affected by an intertrip might not receive any compensation for the operation of the intertrip and be exposed to imbalance within Settlement - for an interim period in the case of scenario (1) and indefinitely in the case of scenario (2). As a consequence, the PSMG considered a potential Alternative Modification to address these possible eventualities. Under the potential Alternative Modification considered, the de-classification of the operation of an intertrip as an Acceptance within Settlement (i.e. the effect of P177) would be contingent on the existence of:

- A framework for the treatment of intertrips under other governance arrangements (e.g. as per the CUSC Amendment Proposal CAP076) or industry agreements.

For example, were a Party to have entered into a commercial intertrip agreement in which a payment was provided by the Transmission Company for the option to trip that Party off the System, then a BOA would not be issued to that Party in relation to an intertrip.

The PSMG requested that ELEXON seek legal advice as to whether or not this potential Alternative Modification would constitute a valid Alternative Modification. ELEXON received advice indicating that it would constitute a valid Alternative Modification.

The PSMG initially believed that the potential alternative Modification Proposal might provide the market with greater assurance that the consequences of being affected by an intertrip would be dealt with somewhere within the industry's governance arrangements. The PSMG noted that such an Alternative Modification would need to be drafted extremely carefully to ensure that Parties were not

(1) unintentionally made ineligible for compensation, (2) eligible to be compensated twice and (3) able to pick and chose the compensation arrangements to apply following the operation of an intertrip.

However, upon further consideration, the PSMG decided, by a majority, not to progress this potential Alternative Modification any further. Its reasons were three-fold. First, some PSMG members considered that it would not address the issue identified by the Proposed Modification – i.e. the need to remove the existing compensation arrangements from the BSC. Instead removal of the BSC arrangements would remain contingent on the existence of agreements outside BSC governance. Second, the 'contingent' nature of the potential Alternative Modification would be detrimental to the clarity and certainty of the Settlement arrangements. Finally, the increased complexity of the legal drafting would introduce a negative impact on Applicable BSC Objective (d).

A minority of the PSMG believed that the potential Alternative Modification would better facilitate the Applicable BSC Objectives in that it represented a practical solution to the cross-governance nature of the existing and proposed arrangements for intertrips – i.e. it would enable the existing compensation arrangements to remain operational until such time as alternative arrangements are approved and established.

The PSMG noted that the majority of consultation respondents believed that this potential Alternative Modification would not better facilitate the Applicable BSC Objectives when compared to the Proposed Modification. See section 6.1.2 for further details regarding the consultation response on this issue.

1.5 Governance and regulatory framework assessment

The PSMG noted that P177 was part of a package of changes proposed across a number of industry codes to establish a framework for the treatment of intertrips.

2 COSTS[4]

PROGRESSING MODIFICATION PROPOSAL[5]

Meeting Cost	£1,000
Legal/expert Cost	£ 0
Impact Assessment Cost	£ 0
ELEXON Resource	35 Man days £ 8,985

[4] Clarification of the meanings of the cost terms in this section can be found in annex 7 of this report

[5] These costs represent an estimate of the cost of progressing P177 made at the IWA stage. They have been reproduced here because no unforeseen costs are believed to have been incurred during the Assessment Procedure.

IMPLEMENTATION COSTS

		Stand Alone Cost	P177 Incremental Cost	Tolerance
Service Provider[6] Cost				
	Change Specific Cost	£0	£0	+/- 0%
	Release Cost	£0	£0	+/- 0%
	Incremental Release Cost	£0	£0	+/- 0%
	Total Service Provider Cost	£0	£0	+/- 0%
Implementation Cost				
	External Audit	£0	£0	+/- 0%
	Design Clarifications	£0	£0	+/-0%
	Additional Resource Costs	£0	£0	+/-0%
	Additional Testing and Audit Support Costs	£0	£0	+/-0%
Total Demand Led Implementation Cost		£0	£0	+/-0%

ELEXON Implementation Resource Cost		2 Man days £440	2 Man days £440	+/- 10%
Total Implementation Cost		£440	£440	+/- 10%

ONGOING SUPPORT AND MAINTENANCE COSTS

	Stand Alone Cost	P177 Incremental Cost	Tolerance
Service Provider Operation Cost	£0	£0	+/- 0%
Service Provider Maintenance Cost	£0	£0	+/- 0%
ELEXON Operational Cost	£0	£0	+/- 0%

[6] BSC Agent and non-BSC Agent Service Provider and software Costs

3 RATIONALE FOR MODIFICATION GROUP'S RECOMMENDATIONS TO THE PANEL

The majority view of the PSMG was that P177, on balance, would not better facilitate the achievement of the Applicable BSC Objectives (see section 1.3 for further details). Therefore, the PSMG recommends that P177 should not be made.

The PSMG recommends an Implementation Date of 25 Working Days following an Authority decision and that, if approved, P177 should be implemented on a Settlement Day basis. See section 8 for further details of the proposed implementation approach.

The PSMG has reviewed the draft legal text and agreed that it addresses the issue raised under P177.

4 IMPACT ON BSC SYSTEMS AND PARTIES

An assessment has been undertaken in respect of BSC Systems and Parties and the following areas have been identified as being impacted by the Proposed Modification.

4.1 BSCCo

P177 would represent a minor change to the BSC that would need to be implemented by BSCCo.

4.2 BSC Systems

Implementation of P177 would not impact any of the BSC Systems and would only require a change to the BSC. The BSC Agent impact assessment is attached as Annex 5.

4.3 Parties and Party Agents

Under P177, a compensatory Acceptance would no longer be issued post-event by the Transmission Company to a BM Unit to offset the discrepancy introduced by the operation of an intertrip between the relevant Lead Party's credited energy volume and its contracted volume. Therefore, when considered against the current baseline (without complementary changes to ABSVD or BSAD), a Lead Party affected by the operation of an intertrip would be exposed to consequential imbalance as a result.

See section 1.2 for analysis of the impact of P177 on a Party affected by the operation of an intertrip.

5 IMPACT ON CODE AND DOCUMENTATION

The PSMG identified impacts on the BSC and a Core Industry Document (i.e. the Grid Code). These impacts are summarised in the following subsections.

5.1 Balancing and Settlement Code

Implementation of P177 would require the following changes to the BSC:

Section	Proposed Modification
Q	Remove text (and all references to associated paragraph) which provides for intertrips to be treated as Acceptances.

Draft legal text is attached as Annex 1.

5.2 Impact on Core Industry Documents and supporting arrangements

The PSMG identified that, were P177 implemented, a consequential change to the Grid Code would be required. The nature of the change is summarised in the table below.

Document	Potential Impact of Proposed/Alternative Modification
Grid Code	To provide consistency between the BSC and the Grid Code in the event that P177 was approved; all references within the Grid Code to the treatment of intertrips as Acceptances would need to be removed.

6 SUMMARY OF CONSULTATIONS

A consultation document was issued on 23 November 2004, with a deadline for responses of 3 December 2004. Seven responses (43 Parties) were received. The responses are attached as Annex 3 of this report and summarised in the table below.

Consultation question	Respondent Agrees	Respondent Disagrees	No Comment
1. Do you believe Proposed Modification P177 would better facilitate achievement of the Applicable BSC Objectives?	1(1)	5(41)	1(1)
2. Do you believe the potential Alternative Modification P177 identified by the PSMG would better facilitate achievement of the Applicable BSC Objectives: i. As compared to the current baseline? ii. As compared to the Proposed Modification?	i. 0 (0)	i. 6 (42)	i. 1 (1)
	ii. 2 (16)	ii. 4 (26)	ii. 1 (1)
3. Do you believe there are any other alternative solutions that the PSMG has not identified and that should be considered?	0 (0)	6 (42)	1 (1)
4. Do you have any views on the impact of P177 on Energy Imbalance Prices, market length and Energy Imbalance Volumes?	5 (36)	1 (6)	1 (1)
5. Where do you believe is the appropriate location for compensation arrangements for intertrips?	n/a	n/a	n/a
6. Were P177 implemented, do you believe complementary changes should be made to: i. the BSAD Methodology Statement? ii. the ABVSD Methodology Statement?	i. 3 (25)	i. 0 (0)	i. 4 (18)
	ii. 3 (25)	ii. 0 (0)	ii. 4 (18)

6.1 Modification Group's summary of the consultation responses

The following subsections provide a summary of the responses to each question.

6.1.1 Assessment Against Applicable BSC Objectives

The majority of respondents believed that P177 would not better facilitate achievement of the Applicable BSC Objectives. Several of these respondents noted their assessment was against the current BSC Baseline (i.e. not taking into account potential changes to other industry codes). The following arguments were made against P177:

- Objective (b): may discourage generators from participating in intertripping schemes.

- Objective (c): would introduce risk for affected Parties in terms of removal of compensation and exposure to imbalance. In addition, affected Parties may no longer be able to recover consequential losses associated with the operation of an intertrip (e.g. costs associated with plant damage).

One respondent made the following arguments in support of P177 against Applicable Objectives (a), (b) and (c):

- Objective (a): removing the existing intertrip arrangements from the BSC and introducing revised arrangements under the CUSC would better comply with Transmission Licence obligations (i.e. arrangements under appropriate governance).

- Objective (b): were CAP076 approved, the continued inclusion of intertrip compensation arrangements within the BSC would be inappropriate inefficient and uneconomic.

- Objective (c): P177 would remove the risk premium factored into the Bids of Parties with intertrip agreements and the consequential impact on Energy Imbalance Prices.

6.1.2 Potential Alternative Modification

No respondents believed that the potential Alternative Modification would better facilitate the Applicable BSC Objectives as compared to the current BSC baseline. Arguments for and against were similar to those expressed in relation to the Proposed Modification. However, in addition, it was noted that the increased complexity of the legal drafting would introduce a negative impact on Applicable BSC Objective (d) and that the 'contingent' nature of the potential Alternative Modification would be detrimental to the clarity and certainty of the BSC.

The majority of respondents believed that the potential Alternative Modification also failed to better facilitate the Applicable BSC Objectives when compared to the Proposed Modification. However, a minority believed that it would because protection would be provided in the event that compensation arrangements were not introduced under another governance framework.

For details of the potential Alternative Modification discussed by the PSMG see section 1.4.

6.1.3 Alternative Solutions Not Identified by the PSMG

None identified or proposed by respondents.

6.1.4 Impact on Energy Imbalance Prices

One respondent believed that P177 would have a positive impact on Energy Imbalance Prices reducing the possibility of a 'System' action with high negative Bid prices having a significant, unpredictable, undesirable and inappropriate impact. Such actions could currently result in 'disproportionate' signals in relation to market length and Parties being exposed to significant imbalance.

Several respondents noted that P177, without complementary changes to the BSAD and ABSVD Methodology Statements, would affect market length, Energy Imbalance Prices and the exposure of affected Parties to imbalance.

6.1.5 Appropriate Location of Intertrip Arrangements

All respondents who commented indicated that they believed, or that previous Authority determinations suggested, that the CUSC was the appropriate location for intertrip arrangements.

6.1.6 Complementary Changes to BSAD & ABSVD Methodology Statements

The majority of respondents who commented indicated that, were P177 implemented, complementary changes to the BSAD and ABSVD Methodology Statements would be desirable to remove the effect on market length and the Energy Imbalance Volume of the affected Party.

However, a minority of respondents believed that until the CUSC arrangements for intertrips had been agreed/finalised it was not possible to answer this question.

6.1.7 Further Comments

One respondent noted that the Ofgem P80/P87 decision letters "made it clear" that Parties should have incentives to trade out imbalance positions for periods "beyond the wall".

6.2 Comments and views of the Modification Group

The PSMG noted that the majority of respondents believed that neither the Proposed Modification nor the potential Alternative Modification would better facilitate achievement of the Applicable BSC Objectives. In addition, the PSMG noted that several respondents had emphasised that their assessments were through comparison of P177 against the current BSC Baseline (i.e. not taking into account potential changes to other Industry Codes).

7 SUMMARY OF TRANSMISSION COMPANY ANALYSIS

A copy of the Transmission Company Analysis is attached as Annex 4. The following subsections provide a summary of the analysis provided and the PSMG's views on that analysis.

7.1 Analysis

The Transmission Company analysis comprised three main elements: the place of P177 within the cross-governance intertrip arrangements sought by the Transmission Company, the categories of intertrip affected by P177 and an impact assessment of P177.

Cross Governance Package of Changes

The Transmission Company emphasised that P177 was one element of a cross-governance package of changes designed to provide an efficient framework (including remuneration) for intertrips in the appropriate industry codes.

In particular, the Transmission Company noted that were CAP076 approved then the existing arrangements for intertrip remuneration should be removed from the BSC (i.e. the changes proposed under P177 should be implemented). However, to ensure that market length would not be distorted as a result of an intertrip and that the affected Party would not be exposed to imbalance, the Transmission Company indicated that complementary changes to the BSAD and ABSVD Methodology Statements respectively would be required. Finally, approval of P177 would create an inconsistency between the BSC and the Grid Code – i.e. that the Grid Code would still provide for intertrips to be treated as Acceptances within Settlement. Therefore, a consequential Grid Code change would be required to remove the reference within the Grid Code to the treatment of an intertrip as an Acceptance.

Categories of Intertrips affected by P177

The Transmission Company indicated that implementation of P177 would end the treatment of 'Operational Intertrips' as Acceptances within Settlement.

CAP076, if implemented, would cover all System to Generator intertripping schemes – i.e. a subset of Operational Intertripping schemes. The Transmission Company noted that, as a consequence, concern had been expressed by members of the PSMG that P177 would remove the only mechanism for remuneration for System to Demand intertrips. However, the Transmission Company indicated that for the provider of a System to Demand intertripping service to have that intertrip volume treated as an Acceptance, it would have to be a large directly connected BSC Party that participated in the Balancing Mechanism. There are currently no providers of System to Demand intertripping services and the Transmission Company noted that it could not envisage a situation where it would require such a Party to provide an intertripping service. However, were such a situation to arise at some point in the future following the approval of P177, the Party concerned would be within their rights to agree remuneration arrangements with NGC for inclusion within its Bilateral Connection Agreement. Moreover, failure to agree such arrangements would leave the Party with the option of referring the connection offer to Ofgem.

Impacts

The Transmission Company indicated that implementation of P177 would have no impact on any of its computer systems or processes or on security of supply.

7.2 Comments and views of the Modification Group

The PSMG noted that implementation of P177 alone would not impact the Transmission Company and that P177 is viewed by the Transmission Company as one element of a package of cross-governance changes to establish a framework for the treatment of intertrips. In addition, the PSMG noted the Transmission Company's comments in relation to remuneration for System to Demand intertripping schemes.

8 IMPLEMENTATION APPROACH

The PSMG noted that, given that P177 had been expressly raised as a consequential change to complement CAP076, it would be desirable for P177 have identical Implementation Date to CAP076.

The proposed Implementation Date for CAP076 is Date of 25 Working Days following an Authority decision. The PSMG proposed that P177 should have an identical Implementation Date such that he Authority would have the scope to implement P177 and CAP076 simultaneously were it so minded.

The PSMG recommends that, were it approved, P177 should be implemented on Settlement Day basis such that it would only apply to intertrips operated on Settlement Days on or after the Implementation Date. This approach was favoured by the PSMG because it would avoid making the change retrospective.

9 DOCUMENT CONTROL

9.1 Authorities

Version	Date	Author	Reviewer	Change Reference
0.1	17.12.04	Change Delivery	PSMG	Modification Group Review
0.2	04.01.05	Change Delivery	Change Delivery	Initial Review
0.3	06.01.05	Change Delivery	Change Delivery	Final Review

1.0	07.01.05	Change Delivery	BSC Panel	Decision

9.2 References

Ref	Document	Owner	Issue date	Version	Hyperlink
1	Modification Proposal P177	-	04.10.2004	-	http://www.elexon.co.uk/documents/modifications/177/P177.pdf
2	Grid Code	NGC	29.10.2004	3/3	http://www.nationalgrid.com/uk/indinfo/grid_code/mn_current.html
3	CUSC Amendment Proposal 76	-	12.08.2004	-	http://www.nationalgrid.com/uk/indinfo/cusc/admin/scripts/uploads/CAP076 - Treatment of System to Generator Intertripping Schemes.pdf
4	Modification Proposal P87	-	31.05.2002	-	http://www.elexon.co.uk/documents/modifications/87/P87.pdf
5	Modification Proposal P87 Decision Letter	Authority	02.09.2003	-	http://www.elexon.co.uk/documents/modifications/87/P087_Ofgem_Decision.pdf
6	Modification Proposal P177 IWA	BSCCo	08.10.2004	1.0	http://www.elexon.co.uk/documents/BSC_Panel_and_Panel_Committees/BSC_Panel_Meetings_2004_-_084_-_Papers/84_012a.pdf
7	BSAD Methodology Statement	NGC	01.01.2005	3.2	http://www.nationalgrid.com/uk/indinfo/balancing/pdfs/BSAD_v3_1_Appx_E.pdf
8	ABSVD Methodology Statement	NGC	01.01.2005	2.1	http://www.nationalgrid.com/uk/indinfo/balancing/pdfs/ABSVD_v2_0_Appx_D.pdf
9	Modification Proposal P80	-	01.05.2002	-	http://www.elexon.co.uk/documents/modifications/80/P80.pdf
10	Modification Proposal P175	-	01.10.2004	-	http://www.elexon.co.uk/documents/modifications/175/P175.pdf

ANNEX 1 DRAFT LEGAL TEXT

See Attachment 1

ANNEX 2 MODIFICATION GROUP DETAILS & TERMS OF REFERENCE

Membership

The membership of the PSMG for the purposes of P177 is indicated in the table below. The columns to the right provide an attendance record.

Member	Organisation	E-mail	27/10/04	07/12/04
Sarah Parsons	ELEXON (Chair)	sarah.parsons@elexon.co.uk	**Y**	**Y**
Roger Salomone	ELEXON (Lead Analyst)	roger.salomone@elexon.co.uk	**Y**	**Y**
Kevin Rendell	NGT (Proposer)	kevin.rendell@ngtuk.com	**Y**	**Y**
Bill Reed	RWE Innogy	bill.reed@rwe.com	**Y**	**Y**

Garth Graham	SSE	garth.graham@scottish-southern.co.uk	**N**	**Y**
Martin Mate	British Energy	martin.mate@british-energy.com	**Y**	**Y**
Mark Manley	BGT	mark.Manley@centrica.co.uk	**Y**	**Y**
Stephen Moore	EDF Energy	stephen.Moore@edfenergy.com	**Y**	**Y**

In addition to the members of Modification Group, the following persons attended one or more meetings:

Attendee	Organisation	E-mail	27/10/04	07/12/04
Lisa Deverick	ELEXON (Lawyer)	lisa.deverick@elexon.co.uk	**Y**	**N**
Simon Bradbury	Ofgem	simon.bradbury@ofgem.gov.uk	**Y**	**Y**
David Hunt	Ofgem	david.hunt@ofgem.gov.uk	**N**	**Y**
Rekha Patel	Conoco Phillips	rekha.patel@conocophillips.com	**Y**	**N**
Sanjukta Round	Cornwall Consulting	-	**Y**	**N**

Terms of Reference

The Assessment Procedure Terms of Reference provided by the Panel required the PSMG to consider in relation to P177:

- **Impact on Settlement –** consideration of the impact on Settlement of removing the existing arrangements for intertrips from the Balancing and Settlement Code. Potential impacts which should be considered include the impact on (1) the Energy Imbalance of Parties affected by the operation of an intertrip, (2) Energy Imbalance Prices, and (3) the deemed market length.

- **Potential Interaction with P175:** Modification Proposal P175 'Development of Provisions related to certain Bid-Offer Acceptances issued pursuant to the Grid Code (e.g. BC2.9 and BC2.10)' seeks to amend the provisions for treatment of Acceptances entered into Settlement pursuant to the Grid Code (BC2.10 includes the operation of intertrips). Therefore, any potential interaction between P175 and P177 needs to be considered

- **Interaction with CAP076:** P177 has been submitted as a consequential change required to the BSC in the event of CAP076 'Treatment of System to Generator Intertripping Schemes' being approved by the Authority. Therefore, consideration of the proposed implementation timetable for CAP076 will need to be considered when determining the proposed Implementation Date for P177. In addition, were CAP076 approved and P177 rejected, the operation of an intertrip would be subject to two compensation mechanisms – one in the BSC and one in the CUSC. The implications of this eventuality need to be considered and noted in the Assessment Report

ANNEX 3 ASSESSMENT CONSULTATION RESPONSES

See Attachment 2

ANNEX 4 TRANSMISSION COMPANY ANALYSIS

Q	Question	Response
1	Please outline any impact of the Proposed Modification (and, if applicable, any 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.	Under the Transmission Licence, National Grid Company has an obligation to have in place a BSC and CUSC. Given the Licence description of these two documents, National Grid believes that it would be better able to meet its licence obligations were intertrip arrangements to be contained within the CUSC rather than the BSC. Further more, were intertrip arrangements to sit within the CUSC, National Grid would be better able to discharge its obligations to operate the Transmission System in an economic and efficient manner as it would not be faced with the possibility of providing compensation to an intertripped party with two instances of compensation under two different codes. Intertrips are an integral part of operating a safe, reliable and economic system. The efficient discharge of its licence obligations requires appropriate arrangements for intertrips to be in existence. National Grid believes that P177 is part of a package of changes to a range of industry codes and documents that will ensure that such provisions are in place.
2	Please outline the views and rationale of the Transmission Company as to whether the Proposed Modification (and, if applicable, any Alternative Modification) would better facilitate achievement of the Applicable BSC Objectives.	Please see the NGT Party response
3	Please outline the impact of the Proposed Modification (and, if applicable, any Alternative Modification) on the computer systems and processes of the Transmission Company, including details of any changes to such systems and processes that would be required as a result of the implementation of the Proposed Modification (and, if applicable, any Alternative Modification	P177 (or its alternative) would have no impact on any of the Transmission Company's computer systems or processes.
4	Please outline any potential issues relating to the security of supply arising from the Proposed Modification (and, if applicable, any Alternative Modification).	Considered in isolation, P177 will have no impact upon Security of Supply.
5	Please provide an estimate of the development, capital and operating costs	The Transmission Company envisages no development, capital or

	(broken down in reasonable detail) which the Transmission Company anticipates that it would incur in, and as a result of, implementing the Proposed Modification (and, if applicable, any Alternative Modification).	operating costs in implementing the Proposed modification.
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 (and, if applicable, any Alternative Modification).	P177 is itself a consequential change that has been driven by the CUSC Amendment Proposal CAP076. As outlined in the NGT Party response, should CAP076 be approved, National Grid believes that arrangements for intertrip remuneration should be removed from the BSC. P177 has been raised with the purpose of doing just that. As part of the suite of changes being introduced to amend the intertrip arrangements, National Grid believes that changes will also be required to BSAD Methodology Statement, ABSVD Methodology Statement and the Grid Code. P177 will result in the intertripped volume no longer feeding into Settlement as a BOA. To ensure that market length is not inappropriately affected, it will be necessary to enter the volume as a zero priced system BSAD action. A change to the BSAD Methodology Statement would be required before such an approach could be adopted. Similarly, the removal of the treatment of the intertripped volume as a BOA will result in the impacted party being subject to imbalance. If Ofgem wishes to retain the existing exposure faced by an intertripped party, the intertripped volume would have to be treated as an Applicable Balancing Service under the ABSVD Methodology Statement. Finally, approval of P177 would create an inconsistency between the BSC and the Grid Code. National Grid believes that a consequential Grid Code modification would be required to remove reference within the Grid Code to the treatment of an Intertrip as an Acceptance. P177 will have no impact on the SOTO Code.
7	Please indicate which categories of intertrip would be affected by P177.	P177 would impact all Operational Intertrips as defined by the Grid

		Code
8	Please indicate which categories of intertrip would be affected by CAP076.	CAP076 would impact all System to Generator Intertrips where the Generator's Intertrip requirements are defined within their BCAs.
9	Any other comments on the Proposed Modification (and Alternative Modification if applicable).	CAP076, as stated above, only relates to System to Generator intertrips. It has been argued that the removal of intertrip provisions from the BSC, as proposed by P177, would remove the only route to remuneration for providers of System to Demand intertrips (as CAP076 is silent on System to Demand Intertrips). For the provider of a System to Demand intertrip to have that intertrip volume treated as a BOA, it would have to be a large directly connected BSC party that participated within the Balancing Mechanism. There are currently no such providers of intertrips, and National Grid can not envisage a situation where it would require such a Party to provide an intertrip. However, were such a situation to arise at some point in the future following the approval of P177, the party concerned would be within their rights to agree remuneration arrangements with NGC for inclusion within its BCA. Failure to agree such arrangements would leave the party with the option of referring the connection offer to Ofgem.

ANNEX 5 BSC AGENT IMPACT ASSESSMENTS

NETA Change Form

Title		Version No.
Removal of Intertrip Provisions from the BSC		0.1
		LogicaCMG Reference
		ICR631
ELEXON Reference	**Date CP Received**	**Date IA Issued**
P177	23 Nov 2004	2 Dec 2004
LogicaCMG Contact Name	**Baseline for Impact Assessment**	
Neil Riddleston	P177 Consultation Document v1.0, dated 23 Nov 2004	

Price Breakdown

Item description	Remarks	Price (ex VAT)
Change Specific		£0
Incremental Release Costs		£0
Fixed Release Costs		£0

Total Price (ex VAT)	**£0**

Price Tolerance	0%
Justification for Price Tolerance	
N/A	

Project Duration	N/A
Cut Off Date for Inclusion in Specified Release (if applicable)	
N/A	

Operational Price (ex VAT)	£0
Rationale	
N/A	

Annual Maintenance Price (ex VAT)	£0
Rationale	
The Annual Maintenance Price is zero under the agreement commencing on 1 January 2005.	

Validity Constraints	
The validity period for this quote is 30 days.	
Authorised Signature	**Date Signed**

Requirements and Solution

Brief Summary of Change

An Intertrip is a device which automatically disconnects a generator (or demand site) from the Transmission System if a specific fault on the transmission System occurs.
Currently, the operation of an Intertrip is treated as a Bid-Offer Acceptance (BOA).
This change will remove this arrangement and a BOA will no longer be issued for the operation of an Intertrip.

LogicaCMG's Proposed Solution

A BOA flow, which would currently be received and processed by NETA Central Systems, will no longer be received.
Therefore, there are no changes needed to NETA Central Systems.

Deviation from ELEXON's Solution / Requirements

None

Operational Solution and Impact

None

Testing Strategy

Unit		Change Specific		End to End	
Module		Operational Acceptance		Participant Testing	
System		Performance		Parallel Running	
Regression		Volume		Deployment/ Backout	

Other:

Validated Assumptions

None

Outstanding Issues

None

Changes to Service

Services Impacted							
	BMRA	CDCA	CRA	ECVAA	SAA	TAA	FAA
Software							
IDD Part 1 (Docs)							
IDD Part 1 (S'Sheet)							
IDD Part 2 (Docs)							
IDD Part 2 (S'Sheet)							
URS							
SS							
DS							
MSS							
OSM							
LWIs							
RTP	None						
Comms	None						
Other	None						

Nature of Documentation Changes	
None	
Nature / Size of System Changes	
N/A	
Deployment Issues, e.g. Outage Requirements:	None
Impact on Service Levels:	None
Impact on System Performance:	None
Responsibilities of ELEXON	
N/A	
Acceptance Criteria	
N/A	
Any Other Information	
None	
A.1.2 Attachments	
None	

ANNEX 6 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 any one Modification implementation.

- **Incremental Cost** - the cost of adding that Modification Proposal to the scope of an existing release. This cost would also represent the potential saving if the Modification Proposal 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 below:

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 Procedure.

SERVICE PROVIDER[7] COSTS	
Change Specific Cost	Cost of the Service Provider(s) Systems development and other activities relating specifically to the Modification Proposal.

[7] A Service Provider can be a BSC Agent or a non-BSC Agent, which provides a service or software as part of the BSC and BSC Agent Systems. The Service Provider cost will be the sum of the costs for all Service Providers who are impacted by the release.

Release Cost	Fixed cost associated with the development of the Service Provider(s) Systems as part of a release. This cost encompasses all the activities that would be undertaken regardless of the number or complexity of changes in the scope of a release. These activities include Project Management, the production of testing and deployment specifications and reports and various other standard release activities.
Incremental Release Cost	Additional costs on top of base Release Costs for delivering the specific Modification Proposal. For instance, the production of a Test Strategy and Test Report requires a certain amount of effort regardless of the number of changes to be tested, but the addition of a specific Modification Proposal may increase the scope of the Test Strategy and Test Report and hence incur additional costs.

IMPLEMENTATION COSTS	
External Audit	Allowance for the cost of external audit of the delivery of the release. For CVA BSC Systems Releases this is typically estimated as 10% of the total Service Provider Costs, with a tolerance of +/- 20%. At present the SVA Programme does not use an external auditor, so there is no External Audit cost associated with an SVA BSC Systems Release.
Design Clarifications	Allowance to cover the potential cost of making any amendments to the proposed solution to clarify any ambiguities identified during implementation. This is typically estimated as 5% of the total Service Provider Costs, with a tolerance of +/- 100%.
Additional Resource Costs	Any short-term resource requirements in addition to the ELEXON resource available. For CVA BSC Systems Releases, this is typically only necessary if the proposed solution for a Modification Proposal would require more extensive testing than normal, procurements or 'in-house' development. For SVA BSC Systems Releases, this will include the management and operation of the Acceptance Testing and the associated testing environment. This cost relates solely to the short-term employment of contract staff to assist in the implementation of the release.
Additional Testing and Audit Support Costs	Allowance for external assistance from the Service Provider(s) with testing, test environment and audit activities. Includes such activities as the creation of test environments and the operation of the Participant Test Service (PTS). For CVA BSC Systems Releases, this is typically estimated as £40k per release with at tolerance of +/-25%. For SVA BSC Systems Releases this is estimated on a Modification Proposal basis.

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.

ANNEX 7 MODELLING OF IMPACT 'BEYOND THE WALL'

See Attachment 3