



November 2002

ASSESSMENT REPORT
Modification Proposal P80 - Deemed Bid Offer
Acceptance for Transmission System faults

Prepared by the P80 Modification Group on behalf
of the Balancing and Settlement Code Panel

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b Distribution

Name	Organisation
Each BSC Party	Various
Each BSC Agent	Various
The Gas and Electricity Markets Authority	Ofgem
Each BSC Panel Member	Various
energywatch	energywatch
Core Industry Document Owners	Various

c Related Documents

The following documents are referenced within this document using the convention [RD/ x]

Reference	Document
1	Transmission access and losses under NETA (February 2002), Ofgem
2	Terms of Reference for the Assessment Procedure of P80
3	Definition Report P80, P080DR, Version 1.0, 12 Jul 02
4	P80 & P87 Consultation Paper, P080AC, Version 1.0, 15 Aug 02
5	P87 Assessment Report P087AR, Version 2.0, 11 Sep 02
6	Report to the Director of the Office of Gas & Electricity 2000-2001
7	Balancing Principles Statement, Version 2.0, 1 May 02
8	Balancing Principles Statement Report (27 March 2001-31 March 2002), May 02

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1 SUMMARY AND RECOMMENDATIONS

1.1 Recommendations

On the basis of the analysis, consultation and assessment undertaken in respect of this Modification Proposal P80 during the Assessment Procedure, the P80 Modification Group ('the Group') recommends that the Balancing and Settlement Code Panel ('the Panel') is invited to:

- **NOTE the contents of this report and the recommendations of the P80 Modification Group;**
- **ENDORSE the recommendation of the P80 Modification Group to proceed to the Report Phase in accordance with Section F2.7 of the Code;**
- **AGREE that the draft Modification Report contain a provisional recommendation that the Alternative Modification P80 should be made with an Implementation Date of 24 June 2003, if an Authority decision is received by 24 February 2003, and an Implementation Date of 04 November 2003 if an Authority decision is received after 24 February 2003 and before 04 July 2003;**
- **AGREE that the Proposed Modification should not be made;**
- **NOTE that no Legal Text has been prepared with respect to the Proposed Modification;**
- **CONSULT with the Authority to determine if they would like the draft Modification Report to contain such text;**
- **In the event that the Authority determines that the Proposed Modification P80 should be made AGREE an Implementation Date of 24 June 2003, if an Authority decision is received by 24 February 2003, and an Implementation Date of 04 November 2003 if an Authority decision is received after 24 February 2003 and before 04 July 2003; and**
- **AGREE that the draft Modification Report be issued for consultation and submitted to the Panel meeting on 12 December 2002.**

1.2 Background

Modification Proposal P80 'Deemed Bid-Offer Acceptance for Transmission System Faults' (P80) was submitted on 01 May 2002 by British Energy.

P80 proposes to obligate the Transmission Company to issue deemed Bid-Offer Acceptances (BOA) when a Balancing Mechanism Unit (BM Unit) is forced to deviate from its Final Physical Notification (FPN) due to faults on the Transmission System outside its control. A Transmission System fault could lead to a participant being left out of balance and exposed to Energy Imbalance Prices, by preventing a BM Unit from exporting or importing notified contracted energy. Under P80, the Transmission Company would be obliged to issue deemed BOA for the full duration of the fault, including any time required to respect a BM Unit's dynamics.

During the assessment of P80, the Group developed an Alternative Modification Proposal. The Alternative Modification is similar to the Proposed Modification in that it covers the full duration of the fault¹, but recognises the difficulties faced by the Proposed Modification in determining suitable disconnection Bid and Offer Prices, and also the difficulties in providing compensation to Consumption BM Units.

The Group recognised two mechanisms for delivering compensation to a Party:

- **Settlement Correction** – an ex-post amendment to Settlement data to allow compensation (or removal of a liability) to be automatically delivered as part of a Settlement Run. The correction can be applied by either a deemed BOA, or a contract notification with a Transmission Company account;
- **Extra Cashflow** – an extra Panel determined cashflow to provide additional compensation over and above compensation (if any) delivered through “Settlement Correction”.

How these relate to the Proposed and Alternative Modifications is shown in the Table 1.1

Table 1.1 – Overview of Proposed and Alternative Modifications

Description		Proposed Modification	Alternative Modification
Settlement Correction (Ex-post)	Eligibility	All BM Units	Only CVA Registered Production BM Units
	Mechanism	Deemed BOA	Contract Notification
	Duration	Full Duration of Fault	Full Duration of Fault
Extra Cashflow (Manual)	Eligibility	Not Available	Only CVA Registered Production BM Units
	Mechanism		Panel Determined
	Duration		Full Duration of Fault

In consideration of the Alternative Modification, the Group recognised a number of difficulties in determining compensation for Consumption BM Units and also Supplier Volume Allocation (SVA) registered BM Units (See Section 6.4/Annex G). As a result, the Group believed that determining explicit compensation for such BM Units would, in most circumstances, deliver compensation that was arbitrary. It was therefore judged that doing nothing, other than allowing retention of System Sell Price (SSP) for the resulting spill, might actually be a better approximation to the “correct” level of compensation. The Group recognised that Exempt Export BM Units, which elect to be registered as Consumption BM Units, would not be eligible for compensation. However, the Group also believed that such an election implies non-usage of the Transmission System, and hence they should be regarded as being out of scope for the purposes of compensation.

¹ Both within the initial Balancing Mechanism Window Period (BMWP) and for subsequent Settlement Periods, until the fault is clear, and the Party has been given sufficient time to return to their prevailing FPN.

1.3 Rationale for Recommendations

The majority of the Group believed that the Alternative Modification would better facilitate the achievement of the following Applicable BSC Objectives:

- (b) **the efficient, economic and co-ordinated operation by the Transmission Company of the Transmission System** - would be satisfied by compensating for the full period of the Transmission System fault, since it would not only expose the Transmission Company to the economic consequences of Transmission System failures, but it would also recognise that the Transmission Company was in the best place to manage the event and determine the correct trades to both balance the Transmission System, and also take the Party out of imbalance;
- (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** - would be satisfied because a fault on the Transmission System represents an unmanageable risk for those participants dependent on a connection to the Transmission System. The degree of exposure to imbalance, and the difficulty and financial impact a Party may face in having to quickly trade out of imbalance, would vary depending on the Party and the type of BM Unit. For some combinations this would reduce their ability to compete.

The Group recognised there would be an administrative overhead to operate these procedures, and that this was made more difficult by the governance structure. However, the Group believed that the potential consequences to the affected Party were sufficient to ensure that the Alternative Modification would better facilitate the achievement of the Applicable BSC Objectives.

Under the Alternative Modification Consumption BM Units do not receive any further compensation, beyond retention of SSP for any spill. The majority of the Group believed that it could not be shown that BSC Objective (c) would be better achieved by providing further compensation. The majority of demand is registered within SVA and hence the associated risk is shared amongst other Suppliers within the GSP Group, it would therefore be difficult to show that further compensation would improve competition amongst Suppliers. In addition the difficulty that BSCCo and the Panel would face in determining an equitable level of compensation would be significant and this would have a detrimental effect on the achievement of Applicable BSC Objective (d) 'promoting efficiency in the implementation and administration of the balancing and settlement Arrangements'.

In so far as the issue of discrimination was concerned, the Group concluded that the preferred approach enabled the most appropriate level of compensation to be paid to Central Volume Allocation (CVA) registered Production BM Units (i.e. those most dependent on a connection to the Transmission System), in all cases, at the lowest overall cost, as compared to the status quo and the other approaches considered. Hence, Applicable BSC Objectives (b) and (c) are better achieved under Alternative Modification P80.

2 INTRODUCTION

This Report has been prepared by ELEXON Ltd., on behalf of the Balancing and Settlement Code Panel, in accordance with the terms of the Balancing and Settlement Code ('the

Code'). The Code is the legal document containing the rules of the balancing mechanism and imbalance settlement process and related governance provisions. ELEXON is the company that performs the role and functions of the BSCCo, as defined in the Code.

An electronic copy of this document can be found on the BSC Website at www.elexon.co.uk

3 MODIFICATION GROUP DETAILS

The P80 Assessment Report has been prepared by the Group, and the membership is detailed in the table below.

Member	Organisation	Role
Neil Cohen	ELEXON	Chairman
Justin Andrews	ELEXON	Chairman
Helen Bray	ELEXON	Lead Analyst
Gwilym Rowlands	ELEXON	Lead Analyst
Isabelle Haigh	National Grid	Member
Rupert Judson	London Electricity	Member
Martin Mate	British Energy	Proposer
Tom Cassells	Scottish Power	Member
Cathy McClay	Edison Mission Energy	Member
Gareth Mills	Magnox	Member
Danielle Lane	Centrica	Member
Paul Jones	Powergen	Member
Mick Walbank	AEP Energy Services	Member
Sanjukta Round	Cornwall Consulting	Member

In addition the following attendees have attended one or more meetings during the Assessment Procedure:

Member	Organisation
Kristian Myhre	Ofgem
Tony Polack	Ofgem
Simon Oliver	Ofgem
Richard Ford	Ofgem
Libby Glazebrook	Edison Mission Energy
Rob Hetherington	London Electricity
Sarah Grimes	British Gas Trading
Bill Reed	Innogy
Roger Salomone	ELEXON
Chris Rowell	ELEXON
David Ahmad	ELEXON
David Tennant	ELEXON

The Group met five times during the four-month Assessment Procedure for P80.

4 BACKGROUND

During the drafting of the New Electricity Trading Arrangements (NETA) no compensation for Transmission System faults was incorporated into the BSC, however, compensation for system constraints and intertrips was set at submitted Bid and Offer Prices. Therefore, P80

was raised to gain equal consideration for Transmission System faults and to ensure that a Party would not be left out of balance and exposed to Energy Imbalance Prices due to a fault on the Transmission System.

P80 was raised by British Energy on 01 May 2002 and was submitted to a two-month Definition Procedure with a Definition Report submitted to the July 2002 Panel meeting.

One-month into the Definition Procedure for P80, Modification Proposal P87 'Removal of market risk associated with the operation of a generator intertrip scheme' was raised. This sought to change the compensation arrangements for intertrips away from deemed Bid Offer Acceptances (BOA) at submitted Bid Prices, to issuing contract notifications to cancel the consequential imbalance. The proposed correction to Settlement would be limited to the Balancing Mechanism Window Period (BMWP). However, the P87 also recognised the potential for an additional payment, should a Party believe additional losses were incurred.

P80 was submitted to a three-month Assessment Procedure, and both P80 and P87 have been assessed by the P80 Modification Group. The Group believed that it was important to reach a consistent rationale for why P80 and P87 may better facilitate achievement of the Applicable BSC Objectives. The P87 Modification Report was sent to the Authority after the October 2002 Panel meeting.

The P80 Assessment Report was due to be presented to the 17 October 2002 Panel meeting. However, the Group requested, and were granted, a one month extension to complete the legal text and resolve a number of issues arising from the legal text. This Assessment Report is to be presented to the 17 November 2002 Panel meeting.

The Group noted the work being carried out by the Transmission Access Standing Group (TASG) set up under the governance of the Connection Use of System Code (CUSC). The Ofgem document 'Transmission access and losses under NETA' [RD/1] describes the creation of firm rights to the Transmission System. It notes that one essential feature of such a scheme is that they should be financially firm and this would lead to participants being compensated for a lack of access in the event of transmission failures.

The Group noted that at the time of writing only CUSC Amendment Proposal CAP043 'Transmission Access Definition' has been raised. CAP043 does not include any provisions relating to compensation for Transmission System faults.

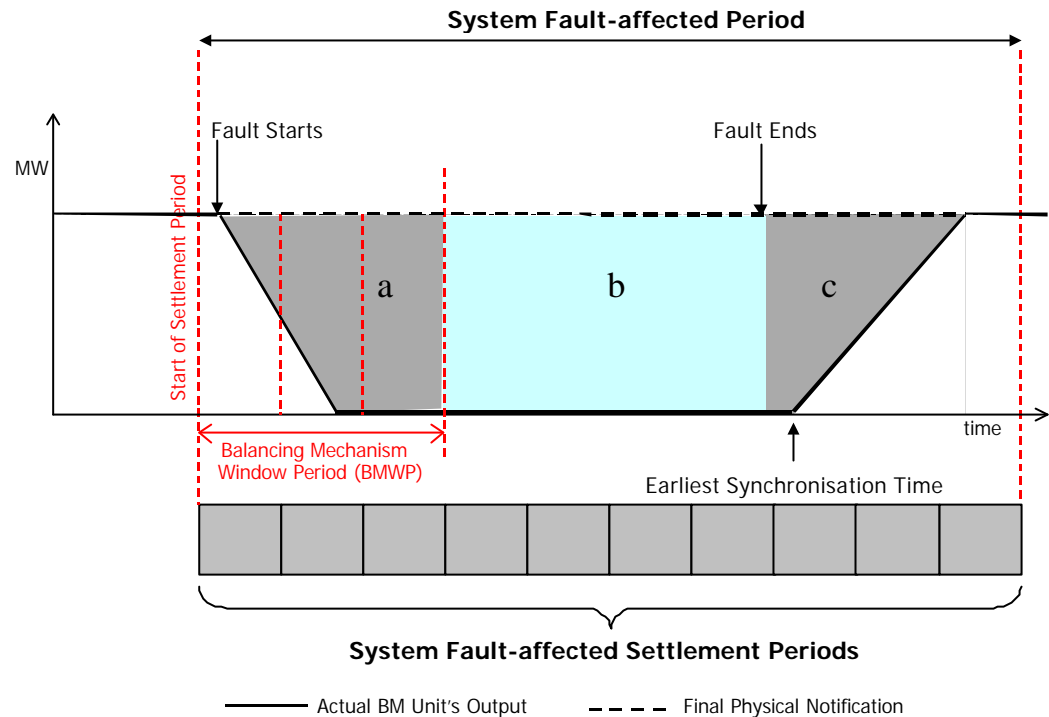
5 DESCRIPTION AND ASSESSMENT AGAINST THE APPLICABLE BSC OBJECTIVES

A key factor in P80 is that a disconnection (or other forced deviation) due to a Transmission System fault (termed a "System Fault" in the draft legal text) may last for a number of Settlement Periods. Figure 5.1 shows the three identifiable periods:

- (a) the BMWP consisting of between two and three Settlement Periods for which Gate Closure has already occurred;
- (b) a time after the initial BMWP, which continues until the fault is physically cleared (this represents the moment when full capacity is technically available to the Party);
- (c) a further period of time before the BM Unit can realistically revert to its original position, within any limitations imposed by its dynamic parameters.

Both the Proposed Modification and Alternative Modification aim to compensate a “System Fault-affected BM Unit” for the full duration of any disconnection from the Transmission System (i.e. for periods (a), (b) and (c)).

Figure 5.1 – Duration of Transmission System Fault



The majority of the Group felt that considering compensation in relation to *all* the affected Settlement Periods, would more correctly attribute the costs over the full timeframe and reduce the market risk of these costs being recovered over a shorter timeframe, and being commensurately higher as a result. The Group noted that compensation for system constraints can already stretch beyond the initial BMWP and that BSC Black Start provisions (Section G3 of the Code) also cover the entire Black Start Period, without any limitation or regard to the initial BMWP. The Group recognised that consideration of the full duration of the Transmission System fault was also an inherent part of the Proposed Modification. Furthermore, if compensation were not entirely dealt with under the BSC, the affected BM Unit would need to reflect its actual position (rather than its theoretical position, assuming that the fault had not occurred) after the initial BMWP and, as a result, any return to pre-fault circumstances in terms of both the commercial and physical position for the BM Unit would necessarily involve a delay of at least one BMWP. This may cause inefficiency in the market.

Both the Proposed Modification and Alternative Modification are considered to be default arrangements within the BSC. It is recognised that each will impose an administrative overhead on both the affected Party and also the Transmission Company. Should both Parties come to a commercial bilateral agreement regarding the treatment of Transmission System faults, then there would be no need for recourse to arrangements within the BSC. In such circumstances it would be a matter for the Transmission Company and Lead Party not to claim this was a “System Fault-affected BM Unit”, and for the arrangements within the BSC to be seen as providing the baseline against which to negotiate the level of compensation.

5.1 Proposed Modification

5.1.1 Description

The original description of the Proposed Modification contained two key principles:

- a deemed BOA should be issued for the duration of the disconnection, i.e. the “System Fault-affected Period”;
- the pricing of the applicable Bids and Offers may need to be controlled;

In expanding these into a solution the Group believed it could be accomplished using only a “Settlement Correction” (See Table 1.1) and added the details described below (Table 5.1). In particular a set of ex-ante disconnection Bid and Offer Prices, rather than the freely submitted set, were introduced. The details in Table 5.1 are split into 4 phases:

- **Pre-Fault Administration** – actions that need to take place when P80 is first implemented and before any fault occurs;
- **Transmission System Fault Notification** – actions that are taken when a fault initially occurs;
- **Settlement Correction** – actions that may, depending on the solution, take place to correct Settlement data and ensure that the affected Party is not subject to imbalance;
- **Extra Cashflow Compensation** – actions that may, depending on the solution, take place to determine an extra cashflow for the affected Party, to supplement any correction that may have been made in Settlement.

Table 5.1 – Proposed Modification²

Pre-Fault Administration
<ul style="list-style-type: none"> • Compensation under P80 is open to all Production and Consumption BM Units. • The administered disconnection Bid and Offer prices will be defined ex-ante and agreed by the Panel. These will be reviewed periodically. • The Transmission Company will provide to BSCCo a list of BM Units along with their rights to compensation due to a “System Fault”. This will identify those considered Production or Consumption BM Units, along with those not eligible for compensation, as they are not paying for access to the Transmission System (i.e. those that are Triad trading Transmission Network Use of System (TNUoS) charges), or have alternative arrangements (i.e. a BM Unit operating with a derogated connection, or covered by a bilateral agreement detailing bespoke compensation for Transmission System faults). This list will be approved by the Panel and updated by the Transmission Company whenever there is a related BM Unit registration change. • Two sets of default Bid and Offer prices will be agreed, one for Production BM Units and one for Consumption BM Units.

² During the Assessment Procedure the Proposed Modification was referred to as potential solution PS5 (See Section 6.6 for further details).

- Should a Party believe the default prices do not reflect their specific plant, or demand characteristics, then the Party will be able to submit to the Panel a new set of disconnection prices. These will require supporting evidence and will be approved by the Panel.
- All administered disconnection prices will be approved by the Authority.

Transmission System Fault Notification

- The Transmission Company will be responsible for notifying BSCCo of the details of any incident to be classified as a "System Fault", including the affected BM Units and the affected Settlement Periods. This is to occur as soon as reasonable practical after commencement of a disconnection.
- The definition of a "System fault" will be based on the following description:

The de-energisation of Transmission Company owned equipment so as to sever one or more connections to a directly connected BM Unit, or to a Distribution System containing a BM Unit, which brings about a forced deviation from FPN (as amended by previous BOA), not due to any action that is already covered by the issuing of BOAs or by any action within a Black Start Period.
- The level of any compensation will be limited to the energy lost due to the failed connection to the Transmission System and will not include energy that was not exported, nor imported, on other connections as a direct, or indirect, consequence of the initial failure.
- The disconnection will be considered to continue until the Transmission Company has notified BSCCo and the Party that the fault is clear and sufficient time has been allowed for the BM Unit to resume service at its prevailing Final Physical Notification (FPN). The time to resume service will be based on an earliest synchronisation time and a Run-Up Rate profile, based on the Dynamic Data Set in force at the time the fault is cleared. This defines the end of the "System Fault-affected Period", as shown in figure 5.1.
- BSCCo shall, if appropriate, consider the existence of a "System Fault" to represent material doubt, should the fault cause the affected Party to enter Credit Default. Nevertheless, as the Party will not be expected to trade out of imbalance, a Party should note that a long term failure may require them to increase their Credit Cover.

Settlement Correction

- The correction will be applied to the next scheduled Settlement Run after the fault has been cleared and details of the incident agreed. The target for this will be the Initial Settlement Run (SF).
- The correction will be applied using a series of BOAs to cover the whole period of disconnection (i.e. all "System Fault-affected Settlement Periods", as shown in figure 5.1).
- The MWh values of the BOAs will be the difference between the FPN (as adjusted by any issued BOA) and metered volume. This will take into account any limit on the lost energy previously defined. During the period when the BM Unit is returning to service, any difference between the metered volume and the profile previously agreed will be a matter for the Transmission Company and is outside of the BSC.

- The MWh values of the BOAs will not include any correction for Transmission Loss Multipliers
- The Party will be responsible for continuing to submit FPNs for Settlement Periods within the "System Fault-affected Period", which will be expected to be compliant with the Grid Code, represent the Parties best estimate of the expected import or export of Active Power assuming the Transmission System fault had not occurred, and also the defined run-up profile at the end of the fault. The policing of this will be a matter for the Transmission Company and is outside the BSC;

Extra Cashflow Compensation

- All compensation for the incident will be recovered using the Bid or Offer Prices, such that there is no requirement for "Extra Cashflow".

The Group recognised that the agreement of the administered disconnection prices was only specified at a high level and that BSC legal text would be required to define the precise obligations in order to achieve the above principles.

As a result of their assessment, described in the next section, the Group decided that the Proposed Modification should not be further developed, and that no legal text should be produced as a part of the Assessment Procedure.

5.1.2 Assessment

In their consideration of the Proposed Modification, the Group recognised that it would need to be assessed for both Production and Consumption BM Units. The majority of the Group believed that it would better facilitate the achievement of the following Applicable BSC Objectives:

- (b) **the efficient, economic and co-ordinated operation by the Transmission Company of the Transmission System** - would be satisfied by compensating for the full period of the Transmission System fault, since it would not only expose the Transmission Company to the economic consequences of Transmission System failures, but it would also recognise that the Transmission Company was in the best place to manage the event and determine the correct trades to both balance the Transmission System, and also take the Party out of imbalance;
- (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** - would be satisfied because a fault on the Transmission System represents an unmanageable risk for those participants dependent on a connection to the Transmission System. The degree of exposure to imbalance, and the difficulty and financial impact, a Party may face in having to quickly trade out of imbalance, would vary depending on the Party and the type of BM Unit. For some combinations this would reduce their ability to compete.

However, when considering Applicable BSC Objective (d) 'promoting efficiency in the implementation and administration of the balancing and settlement Arrangements', the Group recognised that there could be a significant administrative overhead in determining pre-fault Bid and Offer Prices for all BM Units. At one end of the spectrum was a simple two

price system, one for Production and one for Consumption. However without the benefit of the “Extra Cashflow”, the Group recognised that this would probably not be sufficiently flexible, and hence further price categories, or BM Unit specific prices would be needed. The Group recognised the difficulty in pre-determining an appropriate value for each Production BM Unit, without knowing the output level (full or half load), the duration of the fault (short, medium or long), the season (winter, summer) or the underlying fuel prices. This would be further complicated for Consumption BM Units, especially those associated with Supplier Volume Allocation (SVA), or Exempt Export BM Units. As a result the Group recognised that in addition to being rare, each fault would be unique.

In comparing the relative strength of each argument for the Applicable BSC Objectives, and the detrimental effect on Applicable BSC Objective (d), the Group were split as to whether, on balance, the Proposed Modification would better facilitate the achievement of the applicable BSC Objectives. The group agreed this was dependent on the relative value placed on each of these two arguments.

As a result of their subsequent assessment, the Group decided that an Alternative Modification would *better* facilitate the achievement of the Applicable BSC Objectives, than the Proposed Modification. They also recognised the difficulties still faced with formalising the detail of the Proposed Modification. Based on this the Group decided they would not recommend the Proposed Modification. The Group further decided that the Proposed Modification should not be developed further and that no legal text should be commissioned as a part of the Assessment Procedure.

5.2 Alternative Modification

5.2.1 Description

The two main disadvantages the Group believed that the Proposed Modification exhibited were:

- the need to define ex-ante administered disconnection prices that were generic and not related to any one incident;
- the difficulty in determining levels of compensation for Consumption BM Units and the corresponding amendments to the Settlement data to recover an agreed value.

As a result, the mechanism recommended by the Group was to process Production and Consumption BM Units differently:

- Production BM Units – to avoid the Party normally being required to pay System Buy Price (SBP) for their imbalance, a contract notification should be issued to cancel out imbalance for the duration of the disconnection. If this is not sufficient to cover the costs of the disconnection, the Party should be allowed to raise a claim for an “Extra Cashflow”;
- Consumption BM Units – as Consumption BM Units will normally receive System Sell Price (SSP) for any energy they spill³, the Group did not believe any further corrections should be applied to Settlement.

³ The Group recognised that this would not necessarily be the case for Exempt Export BM Units, however, as explained in Section 7.3.4 the Group did not believe that Exempt Export BM Units that were registered as Consumption BM Units should be eligible for compensation under P80.

The difference between this and the Proposed Modification are highlighted in Table 1.1 and details of the processes behind this mechanism are as described in Table 5.2.

Table 5.2 – Alternative Modification⁴

Pre-Fault Administration
<ul style="list-style-type: none"> • Compensation under P80 is limited to “Eligible BM Units”, i.e. BM Units that: <ul style="list-style-type: none"> • are Production BM Units; • are registered with CVA Metering Systems; • submit FPNs in accordance with Section Q3 of the Code.
<ul style="list-style-type: none"> • There are no formal pre-fault administration procedures within the BSC. This is based on a presumption that severing one or more connections can be interpreted as meaning breaking or tripping connection assets, as defined in relevant Connection Agreements, and therefore no mapping of Transmission System assets to BM Units is required.
Transmission System Fault Notification
<ul style="list-style-type: none"> • The Transmission Company will be responsible for notifying BSCCo of the details of any incident, which in their reasonable opinion is to be classified as a “System Fault”, including the “System Fault-affected BM Units” and the “System Fault-affected Settlement Periods”. This is to occur as soon as reasonable practical after commencement of a disconnection. • The definition of a “System Fault” will be based on the following description: <p style="margin-left: 40px;"><i>The de-energisation of Transmission Company owned equipment so as to sever one or more connections to a directly connected BM Unit, or to a Distribution System containing a BM Unit, which brings about a forced deviation from FPN (as amended by previous BOA), not due to any action that is already covered by the issuing of BOAs or by any action within a Black Start Period.</i></p> • The level of any compensation will be limited to the energy lost due to the failed connection to the Transmission System and will not include energy that was not exported, nor imported, on other connections as a direct, or indirect, consequence of the initial failure. In the case of the Alternative Modification this will only affect which “Eligible BM Units” are considered to be “System Fault-affected BM Units”. • The disconnection will be considered to continue until the Transmission Company has notified BSCCo and the Party that the fault is clear and sufficient time has been allowed for the BM Unit to resume service at its prevailing FPN. The time to resume service will be based on an earliest synchronisation time and a Run-Up Rate profile, based on the Dynamic Data Set in force at the time the fault is cleared. This defines the end of the “System Fault-affected Period”, as shown in figure 5.1.

⁴ During the Assessment Procedure the mechanism associated with Production BM Units was referred to as potential solution PS6, whereas the mechanism associated with Consumption BM Units was referred to as PS2 (See Section 6.6 for further details).

- BSCCo shall, if appropriate, consider the existence of a “System Fault” to represent material doubt, should the fault cause the affected Party to enter Credit Default. Nevertheless, as the Party will not be expected to trade out of imbalance, a Party should note that a long term failure may require them to increase their Credit Cover.

Settlement Correction

- The correction will be applied to the next scheduled Settlement Run after the fault has been cleared and details of the incident agreed. The target for this will be the Initial Settlement Run (SF).
- The correction will be applied using a series of contract notifications submitted by the Transmission Company. They will involve a Transmission Company account and account(s) notified by the Lead Party of the “System Fault-affected BM Unit”. This will cover the whole period of disconnection (i.e. all “System Fault-affected Settlement Periods” , as shown in figure 5.1)
- The MWh values of the notifications will be the difference between the FPN (as adjusted by any issued BOA) and metered volume. This will be capped at zero to stop it going negative. During the period when the BM Unit is returning to service, any difference between the metered volume and the profile previously agreed will be a matter for the Transmission Company and is outside of the BSC.
- The MWh values of the notifications will not include any correction for Transmission Loss Multipliers. This may result in the BM Unit having a small amount of imbalance after correction.
- The Party will be responsible for continuing to submit FPN for Settlement Periods within the “System Fault-affected Period”, which will be expected to be compliant with the Grid Code, represent the Parties best estimate of the expected import or export of Active Power assuming the “System Fault” had not occurred, and also the defined run-up profile at the end of the fault. The policing of this will be a matter for the Transmission Company and is outside the BSC.

Extra Cashflow Compensation

- If after taking into account the results of the corrected Settlement Runs, the Lead Party for an “System Fault-affected BM Unit” believes additional compensation is required, then they can raise a claim to the Panel for an “Extra Cashflow”. A claim must be raised within 20 WD of the Settlement Run and the facility is not open to the Transmission Company. There will be no charge associated with raising a claim.
- This facility is also available should the Lead Party believe that, in their reasonable opinion, an “Eligible BM Unit” had been affected by a “System Fault”, even though the Transmission Company had not previously identified it as a “System Fault-affected BM Unit”. In such circumstances the affected Party will be required to provide technical evidence to support their claim of there being a “System Fault” that affected their BM Unit.

- The affected Party will be required to provide supporting evidence to support the level of their claim, including details on
 - “Avoidable Costs” as described in Section G2 of the Code;
 - lost revenue from any potential actions for balancing services and BM activity;
 - any Trading Charges incurred, for example Non-Delivery Offer, or Bid Charges, and any outstanding imbalance.
- The Transmission Company, and any involved Distribution System Operator, will provide addition evidence to either support, or refute the claim, such as historical information on the potential lost opportunity associated with Balancing Services.
- The Panel will determine if an “Extra Cashflow” is payable and its value. The cashflow, if any, will also be in the direction of the Lead Party, and will not result in a payment from the Lead Party to the Transmission Company;
- The decision of the Panel will be final and binding;
- The “Extra Cashflow” will be recovered as part of Daily System Operator BM Cashflow (CSOBM), with an expectation that the cost might eventually be recouped through Balancing Services Use of System (BSUoS)⁵.

5.2.2 Assessment

In their consideration of the Alternative Modification, the majority of the Group believed that it would better facilitate the achievement of the following Applicable BSC Objectives:

- (b) **the efficient, economic and co-ordinated operation by the Transmission Company of the Transmission System** - would be satisfied by compensating for the full period of the Transmission System fault, since it would not only expose the Transmission Company to the economic consequences of Transmission System failures, but it would also recognise that the Transmission Company was in the best place to manage the event and determine the correct trades to both balance the Transmission System, and also take the Party out of imbalance;
- (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** - would be satisfied because a fault on the Transmission System represents an unmanageable risk for those participants dependent on a connection to the Transmission System. The degree of exposure to imbalance, and the difficulty and financial impact a Party may face in having to quickly trade out of imbalance, would vary depending on the Party and the type of BM Unit. For some combinations this would reduce their ability to compete.

The Group believed that the difficulties faced by the Proposed Modification, with Applicable BSC Objective (d) ‘promoting efficiency in the implementation and administration of the balancing and settlement Arrangements’ did not exist for the Alternative Modification. The Alternative Modification is not required to compensate SVA or Consumption BM Units and

⁵ This would need to be specified outside the BSC and is not part of this Modification.

where an extra cashflow is requested, it can be established post fault and determined on a case by case basis.

The Group recognised there would still be an administrative overhead to operate these procedures, and that this was made more difficult by the governance structure. However, the Group believed that the potential consequences to the affected Party were sufficient to ensure that the Alternative Modification would better facilitate the achievement of the Applicable BSC Objectives.

Under the Alternative Modification Consumption BM Units do not receive any further compensation, beyond retention of SSP for any spill. The majority of the Group believed that it could not be shown that BSC Objective (c) would be better achieved by providing further compensation. The majority of demand is registered within SVA and hence the associated risk is shared amongst other Suppliers within the GSP Group, it would therefore be difficult to show that compensation under P80 would improve competition amongst Suppliers. In addition the difficulty that BSCCo and the Panel would face in determining an equitable level of compensation would be significant and would have a detrimental effect on the achievement of Applicable BSC Objective (d).

In so far as the issue of discrimination was concerned, the Group concluded that the preferred approach enabled the most appropriate level of compensation to be paid to CVA registered Production BM Units (i.e. those most dependent on a connection to the Transmission System), in all cases, at the lowest overall cost, as compared to the status quo and the other approaches considered. Hence, Applicable BSC Objectives (b) and (c) are better achieved under Alternative Modification P80.

6 MODIFICATION GROUP INITIAL DISCUSSIONS

This section represents the Group discussions prior to the consultation and impact assessments initiated during the Assessment Procedure.

6.1 Description of Reported Defected

When a Transmission System fault occurs it can stop one or more BM Units either delivering or off-taking energy from the Transmission System. Such an event will cause the BM Unit to deviate from its intended FPN and, where covered by a notified contract, will cause the BM Unit to face imbalance changes within the BSC.

In addition, in the case of a fault lasting longer than the initial BMWP, or a plant with dynamics that stop its immediate return, this means the BM Unit will also face the additional problem of imbalance for future Settlement Periods, or the cost of quickly trading out of imbalance.

Energy Imbalance Prices, or prices for short term trades near to real time, are likely to be less attractive than the original contract price. As a result the Party is likely to face a trading loss on that energy, as well as any unavoidable costs for the operation of the BM Unit. This can create an incentive for portfolio players to use part-loaded, or dynamic, plant to provide their own reserve.

P80 proposes that in the case of a Transmission System fault, which is not caused by the BM Unit, it is not efficient (nor therefore conducive to competition) for the BM Unit to face the cost of disconnection. The Proposer believes it is the Transmission Company that

should be incentivised to avoid faults occurring in the first place, or when they do occur, enabling the BM Unit to return to operation as quickly as possible.

In addition to actions required to manage a Party's imbalance, the Transmission Company must also take actions to ensure the Transmission System remains balanced during such incidents. It is the Transmission Company that is in the best position to ensure both of these are done, in an efficient and co-ordinated manner, using the most optimal plant, and not necessarily simply ones offering the best commercial terms to the Party.

The Proposer believes that the Modification, by not exposing the affected Party to such risks, will promote competition in both generation and supply of electricity, thus better facilitating Applicable BSC Objective (c). The Proposer also believes that by placing incentives on the Transmission Company it will better facilitate achievement of the Applicable BSC Objectives (a) and (b).

In addition the Proposer notes that prior to NETA, generators were protected from the consequences of Transmission System faults using a mechanism analogous to a deemed BOA, with an "administered" price (freely submitted but only relevant for in-merit plant), which depending on circumstances could last for the duration of the fault.

The occurrence of Transmission System faults is considered a rare event (See Annex F for further details).

6.2 Findings of Definition Procedure

P80 was initially sent into the Definition Procedure in order to determine the definition of a Transmission System fault and obtain views regarding Settlement compensation.

As well as exploring some of the detailed issues associated with P80, the Definition Procedure established some key principles which would later be used within the Assessment Procedure. The majority view of respondents to the consultation believed that:

- a Party that is forced to deviate from FPN due to a Transmission System fault is likely to be commercially disadvantaged, not only for the immediate imbalance, but also as a result of any actions it takes to rectify its commercial position;
- a Party should be compensated for such losses and that the BSC offered a transparent process for provision of such compensation;
- any compensation should be payable for the full period of the forced deviation (this is identified in figure 5.1 as periods (a), (b) and (c)) and should not be limited to the BMWP in which it first occurs;
- compensation based on freely submitted Bid and Offer Prices could lead to over compensation and volatility in the Energy Imbalance Prices and imbalance charges.

The Group also defined a basic definition of a Transmission System fault, this is described further in Section 6.4.

During their consideration of the P80 Definition Report the Panel were concerned that the assessment P80 should give equal consideration to all types of Party. As a result the Panel added the following to the Terms of Reference for the Assessment Procedure [RD/2]:

- a solution that compensates generation and demand and seeks to be equitable to large, small and embedded participants in the event of a system fault.

6.3 Initial Discussions

The majority view of respondents during the Definition Procedure was that compensation should be payable, and cover the entire period of deviation from FPN. The Group recognised that this raised issues about compensating beyond the initial BMWP, such as those already considered in relation to Modification Proposal P59 "The Acceptance of Bids and Offers to Honour a BM Unit's Dynamic Parameters Beyond the Balancing Mechanism Window".

The Group felt that considering compensation in relation to *all* the affected Settlement Periods, would more correctly attribute the costs over the full timeframe and reduce the market risk of these costs being recovered over a shorter timeframe, and being commensurately higher as a result. In addition the Group noted that compensation for system constraints can already stretch beyond the initial BMWP and that BSC Black Start provisions (Section G3 of the Code) also cover the entire Black Start Period, without any limitation or regard to the initial BMWP. The Group recognised that consideration of the full duration of the disconnection was also an inherent part of the Proposed Modification.

Furthermore, if compensation were not entirely dealt with under the BSC, the affected BM Unit would need to reflect its actual position (rather than its theoretical position, assuming that the fault had not occurred) after the initial BMWP and, as a result, any return to pre-fault circumstances in terms of both the commercial and physical position for the BM Unit would necessarily involve a delay of at least one BMWP. This may cause inefficiency in the market.

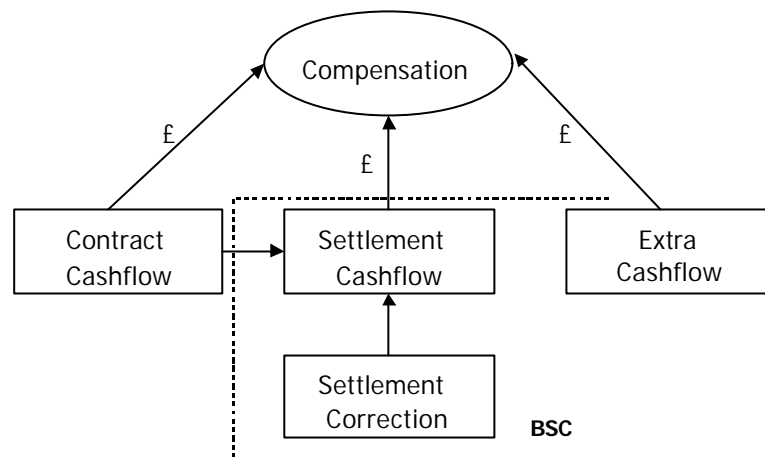
The Group therefore believed it was not consistent to avoid consideration of actions beyond the initial BMWP and that possible solutions should not be discounted on such grounds. As a result the Group focused their early discussions on the mechanics of providing compensation to an affected Party, both within and after the initial BMWP.

The Group considered that given the low occurrence of Transmission System faults that it would be appropriate to work within the existing Settlement calculations (as defined in Section T of the Code), and that a proposed solution should seek to avoid software changes to the core BSC Systems.

The Group considered how the Settlement calculations were carried out and in particular how Parties were charged for imbalance. The value of any forward energy contracts notified to the BSC Systems are not known within the BSC, and hence not physically an input into these calculations. However, during a Transmission System failure a Party with Generating Plant would effectively receive money outside the BSC for energy they would not deliver within the BSC, and a Supplier effectively pay money outside the BSC for energy they would not receive within the BSC. Although the BSC does not know the value of these contracts, the calculation of imbalance charges takes their existence into account. Generators that would become short would pay SBP for their resulting imbalance, and Suppliers that would become long would receive SSP for their resulting imbalance. The Group recognised that the financial value of these forward contracts was important to the consideration of P80.

As a result of recognising the value of the "Contract Cashflow", and that the existing BSC Systems would continue to automatically calculate a "Settlement Cashflow" according to the current BSC rules (i.e. Section T of the Code), the Group created the model shown in Figure 6.1.

Figure 6.1 – Factors in Calculating Compensation



This model showed that in order to be able to determine and control a fixed value of “Compensation” that two approaches were possible:

- “Settlement Correction” – this involves making changes to the underlying Settlement data, such that the automatically calculated “Settlement Cashflow” would deliver the desired value;
- “Extra Cashflow” – if the automatically calculated “Settlement Cashflow” does not deliver the required value, taking into account the “Contract Cashflow”, then an “Extra Cashflow” could be determined. This may be defined inside, or outside, of the BSC.

The Group recognised that any solution may use either of these approaches, or a combination, and that there were advantages and disadvantages to each:

- an “Extra Cashflow” would be hard to determine and would probably involve the body concerned exercising some form of discretion⁶. Whereas a solution based on a more sophisticated form of “Settlement Correction” could deliver all the compensation automatically and avoid the need to define and determine a new cashflow;
- the Settlement calculations are complex and calculating a “Settlement Correction” that can successfully take into account all parameters, such as the FPN, any BOAs the metered volume for the BM Unit, and any notified contracts for the Party, could be difficult;
- this complexity is highlighted by considering the implication of using “Settlement Correction” to simply cancel out a Party’s imbalance. As illustrated in [RD/4 Annex B], and based on a simple scenario, it can be seen that the relative level of *reward* for Production BM Units, and *penalty* for Consumption BM Units, can be numerically greater than the related *penalty* for simply exposing both to imbalance charges. This indicates the sensitivity that the calculations exhibit and the difficulty in influencing them to deliver a defined level of compensation;
- “Settlement Correction” could be implemented using contract notifications or BOAs and each had their own characteristics:

⁶ The Group recognised that if an “Extra Cashflow” was defined within the BSC, that it would need to be the Panel’s responsibility. In their consideration of P87 the Group had already recognised that the Trading Disputes Committee (TDC) was not a suitable body for a role that required the use of discretion.

- a contract notification was equivalent to Bid or Offer Price of £0/MWh;
- BOAs would automatically compensate for changes due to Transmission Loss Multipliers (TLM), where contract notifications would not; and
- failure to follow a defined profile with BOAs could attract non-delivery charges, whereas with contract notifications it could result in receiving SSP for additional spill;
- using "Settlement Correction" to compensate for the entire period of the disconnection would involve obligations that would be outside the initial BMWP, in order to ensure the correct supporting data enters Settlement. Whereas an "Extra Cashflow" could be either determined inside, or outside of the BSC;
- any prolonged exposure to imbalance will impact a Party's Energy Indebtedness. Depending on how and when "Settlement Corrections" are applied, additional steps may be required to ameliorate effects on a Party's Credit Cover.

The Group recognised that any potential solution would need to consider these issues and the difficulty in determining a suitable level of compensation, that does not over reward the affected Party, and yet does not risk penalising them even further.

6.4 Fault Definition and Classification of BM Units

The Group recognised there were two important aspects to consider in relation to a Transmission System fault:

- what constitutes a Transmission System fault;
- which BM Units are eligible for compensation.

During the Definition Procedure the Transmission Company had suggested the following as a definition of a Transmission System fault:

The de-energisation of National Grid owned equipment so as to sever all connections to a directly connected BM Unit.

The Group recognised that the Transmission Company would issue BOA for the majority of events on the Transmission System, including Emergency Instructions⁷, and hence "sever all connections" may be an accurate description of a Transmission System fault.

However, the Group were concerned with two aspects: unduly limiting compensation only to directly connected BM Units, and the two state definition, which did not include partial deviations from FPN. The Group initially favoured a definition of the form:

Non-availability of the Transmission System which brings about a forced deviation from FPN as amended by previous Bid-Offer Acceptances, not due to any action that is already covered by the issuing of Bid-Offer Acceptances, or by any action within a Black Start Period⁸.

⁷ Section Q5.1.3(b) of the Code excludes those Emergency Instructions issued in accordance with BC2.9.1.2(e) of the Grid Code, which relates to Black Start and some circumstances the "Re-Synchronisation of De-Synchronised Island")

⁸ The clause about "Black Start Period" was left off the definition reported in the Definition Report [RD/3], but was a recognised exclusion during discussions within the Group.

The Definition Procedure had also identified the difficulty in determining which BM Units were eligible for compensation under P80. The Group recognised the following potential problem areas:

- the process of Supplier Volume Allocation (SVA) performed by the Supplier Volume Allocation Agent (SVAA) is already a risk sharing mechanism and the profiling of Non-Half Hourly demand makes it hard to determine the impact on any particular Supplier;
- the majority of demand is connected to Distribution Systems and not directly to the Transmission System. Compensation should only be payable for a fault directly attributable to the Transmission System. This is made more complex by the architecture of Distribution Systems where the network is in some cases resilient to the failure of a single Grid Supply Point (GSP);
- unlike generation, demand is a two level architecture with Suppliers and customers. Whilst it is generally the customers who are directly affected by any loss of energy, it is the Suppliers that are Parties to the BSC, and the ones who are directly exposed to any imbalance;
- some Generating Plant (Licensed and Exempt Export BM Unit) are physically embedded in Distribution Systems, in some cases this is simply a feature of who owns the assets and the Generating Plant concerned is primarily supplying the Transmission System and directly participating in the Balancing Mechanism. In other cases the Generating Plant is deeply embedded and effectively using all their output to net off the overall demand for the Distribution System, and hence GSP Group. In such circumstances in the event of a Transmission System failure they can even be delivering additional value in supporting the Distribution System;
- the majority of consultation responses during the Definition Procedure believed that compensation should be available to embedded generators, and that whether they pay TNUoS may be a mechanism to determine whether compensation should be available. However, the Group recognised difficulty in using such a definition, as TNUoS is not recognised within the BSC, and is also complicated by the trading of embedded benefits;
- Exempt Export BM Units that are effectively producing energy are able elect to be treated as Consumption BM Units, either by explicitly choosing to be a Consumption BM Unit within a Sole Trading Unit, or joining a registered Trading Unit;

The issues relating to Distribution Systems and GSP Groups are explored in more detail in Annex G.

6.5 Interaction with Modification P87

Shortly after the Definition Procedure for P80 was initiated, the Transmission Company raised Modification Proposal P87. This aims to change the mechanism for compensating BM Units that are disconnected due to the operation of an intertrip. Currently the compensation mechanism is based on issuing a deemed BOA against freely submitted Bid and Offer Prices. P87 recognised that some BM Units are at times submitting Bid Prices of £-99,999/MWh and this could lead to very large payments to the Party concerned (See Annex A of [RD/4]).

This was an issue that had been recognised during the P80 Definition Procedure and was considered as part of the consultation process.

A further complication was that the Group recognised there were similarities between system constraints, intertrips and Transmission System faults and the Group believed that rather than being distinct categories they were really part of a spectrum (See Section 2 of [RD/4]). Figure 6.3 shows each of these events and the compensation approaches discussed within the P80 and P87 Proposed Modifications.

Table 6.1 – Compensation For Different Events

	Compensation Approach		
	None	Other	Bid/Offer
System Constraints			Current
Intertrips		P87 ←	Current
Transmission System Faults	Current		→ P80

The Group recognised the Transmission Company's concern that there was a reduced level of management and competition moving along the spectrum from a system constraint to an intertrip and then onto a system fault. A system constraint is identified pre-fault and in many cases can be managed by considering a number of options. In comparison a Transmission System fault is identified post-fault, leaving the Transmission Company with no alternative management options. The management of an intertrip is in between, and can display characteristics of each. The arming of an intertrip is a pre-fault action (although alternative Transmission Company actions may be more limited), whereas the operation of the intertrip is a post-fault event.

However, the Group also recognised that to a Party they all represented unexpected disconnection due to a fault, or a reason, outside their control or responsibility.

The Group believed that because of these factors, it may not be appropriate to have a single solution, and that two, or possibly three solutions may be required. However the Group also believed that the treatment and hence recommendations for P80 and P87 should be consistent⁹.

6.6 Potential Solutions

In considering the issues described in Section 6.3, the Group recognised that a number of approaches were possible for delivering compensation:

- should "Settlement Correction" be limited to the BMWP, or should it be applied to the full duration of the disconnection;
- should "Settlement Correction" always be applied ex-post, or should it be possible for ex-ante corrections to be included in the Settlement data before being submitted to the BSC Systems, making the data displayed on Balancing Mechanism Reporting Agent (BMRA), and in the Interim Initial (II) Settlement Run correct, and also reducing a Party's Energy Indebtedness;

⁹ Modification P87 is now with the Authority and recommends a solution similar to that proposed as the Alternative Modification for P80.

- should “Settlement Correction” be applied using Bid Offer Acceptances (BOA) or contract notifications to correct the Account Bilateral Contract Volume (QABC);
- should an “Extra Cashflow” be provided, and if so should it be within the BSC or outside.

The Group combined these into a number of different potential solutions as shown in table 6.2. There are more details of each of these in Section 4.3 and Annex C of the P80 consultation document [RD/4].

Table 6.2 – Potential Solutions

Potential Solution	BMWP Ex-Post	Future Ex-Ante	Extra Cashflow	Comments
PS1	No Correction	No Correction	No	Current / Alternative (Consumption)
PS2	No Correction	No Correction	Yes	
PS3	BOA Correction	No Correction	No	
PS4	QABC Correction	No Correction	Yes	
PS5	BOA Correction	BOA Correction	No	Proposed
PS6	QABC Correction	QABC Correction	Yes	Alternative (Production)

In formulating this table the Group believed any actions taken outside the BMWP should, where possible, be ex-ante to minimise the level of post event correction to Settlement¹⁰. In addition the table should make no reference to whether an “Extra Cashflow” is inside or outside the BSC, as that could be considered separately, and did not affect the overall architecture.

The table¹¹ shows that PS1 represents the current arrangements for Transmission System faults, whereas PS5 represents the Proposed Modification. Although not known at that time the table also shows PS1 (Consumption BM Units) and PS6 (Production BM Units), which became the Alternative Modification for P80.

In considering the representation of the Proposed Modification (and hence PS5) the Group believed it had the following characteristics:

- the correction method should be based on the Transmission Company issuing BOAs for the full duration of the fault, including after the initial BMWP. This was a key feature of the modification as proposed, i.e. “reflecting the forced deviation, for as long as the situation continues”;
- the original description notes concerns over the lack of competition in Bid and Offer Prices and that this could be met through regulation or bilateral contracts with the

¹⁰ The P80 Definition Procedure had established that it could take up the Transmission Company up to 1 working day to determine whether a P80 style system fault was indeed caused by the Transmission System (i.e. eligible for compensation), or the Party concerned (i.e. not eligible). This uncertainty would affect all solutions but in particular PS5 and PS6, which would benefit from being able to make ex-ante corrections.

¹¹ These potential solutions were also used in the assessment of P87, with PS3 representing the current arrangements for intertrips, PS4 representing the P87 Proposed Modification and PS6 the recommended P87 Alternative Modification.

Transmission Company. As a result the Group believed that a solution based on administered disconnection prices reflects the Proposed Modification;

- the Proposed Modification recognised that suitable Bid and Offer Prices should be able to deliver all the necessary compensation and the concept of an “Extra Cashflow” was not described;
- in order to allow ex-ante corrections, the administered prices would need to be determined prior to any fault. This requirement also ensures the agreed prices are generic and are not tailored to fit the circumstances of a particular fault, i.e. not influenced by a Party’s desire to agree values that deliver a defined outcome for the “Settlement Cashflow”.

The Group recognised that both PS5 and PS6 attempt to provide “Settlement Correction” for the full period of the disconnection, and hence extend beyond the initial BMWP. This raises issues about a BM Unit subsequently altering the intent of their FPN, previously discussed in relation to Modification Proposal P59. The Group believed that FPN (and Physical Notification after the initial BMWP) was the only realistic datum¹², and for any solution that extends significantly after the BMWP there would be a requirement to ensure that values submitted after the fault were consistent with the intentions at the time of the fault. Various solutions for determining FPN after the initial BMWP were proposed, such as freezing the FPN and dynamics at the time of the failure and rolling them forward into future Settlement Periods and Settlement Days. However, the majority of the Group believed that parties should be free to continue submitting FPNs and dynamics, and that any abuse should be resolved outside the BSC.

6.7 Sunset Clause

The Group discussed the inclusion of a sunset clause, as this had been included in the original Modification Proposal P87.

In relation to P87 the Group had not been in favour of a sunset clause, as it was difficult to define a suitable trigger. If the trigger is drafted too loosely it could risk prompting questions as to whether the sunset clause should be triggered or not. If drafted too narrowly it could risk failing to activate. In addition the Group believed that the Modification Process is the correct mechanism to make future changes to the BSC, at a time when any future changes can be correctly assessed as to their impact on the Applicable BSC Objectives. For further discussion see the P87 Assessment Report [RD/5]. The Group believed these arguments were also applicable to P80.

The purpose of the sunset clause in P87 was to allow the modification to be superseded by transmission access provisions under the CUSC. However, the Group were concerned as to whether the Settlement issues could be fully addressed outside of the BSC, and hence whether some form of imbalance correction within the BSC would still be required in the future. Furthermore, the CUSC provisions have not yet been developed and thus their scope and extent is unknown. P80, as proposed, does not include a sunset clause, and was raised because the Proposer did not believe this issue was being satisfactorily addressed under the current transmission access arrangements being developed under CUSC.

For these reasons the Group did not believe a sunset clause would be appropriate for P80.

¹² The majority of respondents during the Definition Procedure also believed that FPN was a suitable datum.

6.8 Initial Group View and Assessment Consultation Process

The Group recognised that exposure to imbalance both within the initial BMWP and beyond represents a significant risk to the Party concerned, especially with the uncertainty that would surround any event and its expected duration. Although these factors would be outside the control of the affected Party, currently the Party would be the one needing to decide how to correct their expected imbalance during that period. Therefore, the Group favoured approaches where the risk and incentives were placed on the Transmission Company, who were best placed to manage those risks, rather than the affected Party. Furthermore, having the Transmission Company effectively manage the incident, and not expecting a Party to manage their resulting imbalance, would help reduce the duration of any incident. The BM Unit would be able to resynchronise as soon as the fault was cleared, without having to reorganise any commercial contracts or be delayed by the effect of Gate Closure.

At this stage the initial views of the Group were that for:

- Production BM Units - PS4, PS5, and PS6 (See Table 6.2) were all viable solutions. All three could provide compensation for the full duration of any fault, PS4 minimised the problems associated with predicting the future levels of FPN, whereas PS5 and PS6 reduced the affected Party's need to manage the fault;
- Consumption BM Units - PS1 was the favoured approach, acknowledging that the Party would at least receive SSP for spill. Whilst the Group believed PS2 would offer a route for additional compensation, it was recognised that the problems described in Section 6.4/Annex G related to the impact on Suppliers and embedded generators, would make it difficult to determine an accurate and representative value.

The Group felt that at this stage in the assessment it was appropriate consider views obtained through consultation (See the P80 consultation document [RD/4]) before attempting to narrow down this selection further. Although this meant consulting and performing impact assessments on a range of potential solutions, rather than a fully specified Modification Proposal and Alternative, the potential impacts for each potential solution were considered to be similar.

In addition to the potential solutions, the Group wanted the industry view on:

- the relationship between the system constraints, intertrips and Transmission System faults, the degree to which they were related and whether they should be treated consistently;
- whether any "Extra Cashflow" is required and if so whether it should be defined within the BSC, or outside;
- the treatment of embedded generation and whether it should be eligible for compensation;
- whether there should be a sunset clause linked to the introduction of transmission access, and whether it was considered this was achievable or not.

7 ASSESSMENT CONSULTATION RESPONSES AND MODIFICATION GROUP ANALYSIS

This section summarises the results of the consultation and impact assessments that took place between 15 August 2002 and 28 August 2002, and the resulting Group analysis.

7.1 Summary of Assessment Consultation Responses

16 Responses were received from 39 Parties. Of these 3 responses, representing 4 Parties, provided no comments, or had no further comments in addition to any comments they made during the Definition Procedure (full details of the question and responses are contained in Annex B).

7.1.1 System Constraints, Intertrips and System Faults

The majority of respondents agreed with the Group that:

- system faults, intertrips, and system constraints are all mechanisms by which a BM Unit is prevented from delivering or off-taking from the Transmission System;
- although the causes and management may be different, the effect on the participant was similar;
- the spectrum reflects the change in the amount of choice and control the Transmission Company has in taking actions;
- system faults and intertrips should be treated in a consistent manner, but that this did not necessarily mean that the mechanism has to be identical;
- one respondent supported the principle of using BOAs to compensate for all three instances, however, they were concerned regarding its appropriateness for when there is little choice in whether or not to accept the BOA;
- one respondent stated that a system fault can be viewed as an extreme system constraint.

Of those that disagreed with the Group:

- one respondent believed that they were distinctly different, in that Transmission System faults impose an unexpected detriment on a BSC Party and thus deserves greater compensation than intertrips, which can be covered by a bilateral commercial agreement;
- another respondent did not believe that there was a spectrum and that there should be no compensation for either intertrips or Transmission System faults;
- one respondent believed generators should be compensated when a Transmission System fault occurs to ensure that the Transmission Company has the appropriate incentives to maintain and operate the system efficiently, whereas for compensation for intertrips should be dependent on their connection agreement.

7.1.2 Potential Solutions

The Group had already recognised that there was a difference between compensating Production BM Units and Consumption BM Units and hence questioned Parties about each independently.

7.1.2.1 Production BM Units

The majority of respondents agreed with the Group, that a solution based on PS4, PS5 or PS6 would better facilitate the Applicable BSC Objectives and could recover compensation for the whole period of disconnection:

- four respondents supported PS4, which would only require the Transmission Company to correct Settlement during the initial BMWP and also allowed any “Extra Cashflow” to be defined outside of the BSC. The Transmission Company stated that they considered both PS5 / PS6 Ultra vires as they deal with compensation outside the governance of the BSC;
- four respondents supported PS5, which would provide the affected Party with appropriate compensation in a transparent manner and could also be used to deliver different levels of compensation to different types of Party (e.g. Production versus Consumption BM Units). One respondent stated their choice was PS3, but that this could cover the entire period of disconnection (i.e. like PS5) by requiring the Transmission Company to honour a BM Unit’s dynamics, as outlined in the Balancing Principles Statement.
- two respondents supported PS6 which deals with the problem of imbalance by removing it, effectively at a Bid Price of £0/MWh;

Of those respondents that supported other solutions:

- two respondents stated that the Modification Proposal should be rejected, such that there is no compensation for system faults in the BSC (i.e. PS1). One of the respondents stated that this is the most appropriate solution as no cost for faults will fall on other Parties. The other respondent believed that an enduring solution will be best provided by transmission access arrangements currently being developed under CUSC;
- one respondent believed that they required further information before they could determine which potential solution best facilitated achievement of the Applicable BSC Objectives.

7.1.2.2 Consumption BM Units

The responses to question 4 were split between those who agreed with the Group that PS1 represented the solution that better facilitated the Applicable BSC Objectives, and those who supported another solution, or did not express a view.

Of those respondents that supported PS1:

- three agreed with the Group on practical grounds, that it was considered too complex to determine a mechanism that could accurately compensate Consumption BM Units;
- two respondents, although agreeing with the Group, did so on the grounds they considered that P80 should be rejected;

Of those respondents who indicated support for other potential solutions, which could deliver compensation within the BSC:

- three respondents supported either PS4 or PS6, which would allow for an “Extra Cashflow”;
- four respondents supported PS5 as this provides the same approach for Production and Consumption BM Units;

The Transmission Company’s response contained the following rationale for not including Consumption BM Units:

The proposal for Supplier BM Units is a local (GSP based) risk sharing scheme, however, in effect the GSP groups are currently operating a local risk sharing scheme due to the assumptions in allocating SVA metering to specific suppliers. The low potential risk for Suppliers can be shown by the following calculation; the average MWh lost in the last two financial years is approximately 500MWh. Even if this is compensated at £100/MWh (figure chosen as worst case estimate of domestic per unit price) this only equates to £50,000. This is shared out on a volume weighted basis i.e. A Supplier supplying 30TWh annually (Annual Total = 300TWh) would receive only £5,000. So we propose excluding SVA BM Units and let them rely upon the local risk sharing scheme rather than incurring costs for the very limited benefit of a national scheme.

7.1.3 Extra cashflow within or outside of the BSC

A variety of views were expressed regarding the cashflow, with no overall majority in favour of any solution:

- four respondents stated that an extra cashflow should be outside of the BSC due to the governance problems of compensation outside the BMWP;
- four respondents stated that it should be inside the BSC on the grounds of transparency and simplified governance (i.e. all compensation in one place);
- two respondents stated that the “Extra Cashflow” was not applicable for their solution. Examination of their solutions showed they supported solutions that automatically provided all cashflows within the proposed solution and hence BSC;

In addition two respondents were not in favour of P80 and hence the cashflow.

7.1.4 Embedded Generation

With the exception of the two respondents that did not support P80 and the one respondent requiring further information, the responses were unanimous that compensation should not be limited to directly connected BM Units and should include all those who had paid for access to the Transmission System. The majority of the Group linked this to payment of TNUoS.

7.1.5 Requirement for a sunset clause

The majority of respondents agreed with the Group and did not believe there was a requirement for a sunset clause, of those that did not agree with the Group:

- one respondent stated that a sunset clause should be the transmission access go live date;
- one respondent recognised that compensation may be dealt with under the remit of transmission access and that, when/if this is established, these terms should take precedence;
- another respondent, who believed that P80 should be rejected, stated that if P80 was approved it should be reviewed when transmission access was introduced;
- one respondent stated that a sunset clause should form part of a seamless transition and the trigger should be full implementation of equivalent arrangements under CUSC.

7.2 Summary of Impact Assessments

The Central Volume Allocation (CVA) BSC Agent's high level impact assessment stated that to document the processes to carry out ex-post notifications or acceptances would cost £30,000 and 6 weeks to develop. Furthermore, it would cost approximately £2,000 per incident (see Annex C).

The Transmission Company's high level impact assessment stated a preference for contract notifications to be issued (ex-post), as control room timescales would not allow for ex-ante actions to be completed during a the period of disconnection (see Annex D).

ELEXON recognise that there will be ELEXON effort required to ensure that the affected BM Unit's imbalance is removed. There will also be effort in preparing and submitting a claim to the Panel for extra compensation. This was estimated as a minimum of 7 weeks on top of the CVA BSC Agent's estimate.

7.3 Modification Group Analysis

The Group recognised the following had occurred since the consultation:

- the recommended Alternative Modification for P87 had been endorsed by the Panel based on PS6, with an "Extra Cashflow" defined in the BSC. During the assessment of P87 the Group noted that a small majority of responses to the P87 consultation were in favour of a cashflow outside of the BSC, however, the Group felt that this would be difficult to mandate and agreed that any "Extra Cashflow" should reside within the BSC. In addition this would avoid any issues that could be raised concerning split governance and provide the simplest solution;
- the Transmission Company had indicated in their impact assessment that a solution based on ex-ante corrections to Settlement would place additional demands on the Control room. In considering P87 the Group had agreed that the cost and effort of developing robust real-time procedures would be significant and, that in comparison to the expected frequency of such events, would be difficult to justify. As a result the Group had accepted that all corrections to Settlement data were likely to be ex-post.

7.3.1 System Constraints, Intertrips and System Faults

The Group noted that the majority of respondents supported the Group's view that there was a spectrum between system constraints and Transmission System faults, and that whilst the Transmission Company's actions may be very different, the overall effect on the

BM Unit is similar. The majority of respondents believed that any solution for P80 should be consistent with the recommendations for P87, but recognising that this does not necessarily equate to identical mechanisms.

The Group also noted that some respondents believed that there was a stronger justification for compensating Transmission System faults, than there was for intertrips, as this later category could always be covered by commercial arrangement as part of a connection agreement.

7.3.2 Potential Solutions

The Group confirmed their original view, contained in the P80 consultation document [RD/4], that PS5 constituted the original Modification Proposal with the refinement of using administered prices and that BOAs would be issued for the full duration of the forced deviation. The Group also confirmed their view that a key feature of PS5 was that it was to recover all compensation without the need for an "Extra Cashflow" and that the administered Bid and Offer Prices would need to be determined prior to any fault.

Prior to the assessment consultation, the Group initially considered that PS4, PS5 and PS6 were all viable solutions to compensate Production BM Units, and that for Consumption BM Units, PS1 was initially the preferred approach.

The Group recognised that the range of arguments and views expressed in the consultation responses reflected the initial considerations by the Group:

- Production BM Units - there was majority support for a solution based on PS4, PS5 or PS6, that would provide compensation for the full duration of the disconnection;
- Consumption BM Units - the respondents were split between those supporting a solution based on PS4, PS5 or PS6, and those supporting PS1

The Group believed the split of opinion about Consumption BM Units reflected the difficulties the Group had faced during their initial discussions. The support for PS5 reflected a desire for a consistent solution between Consumption and Production. However, the Group believed the support for PS4 and PS6 could reflect a desire for the "Extra Cashflow" associated with these solutions, which is not available with PS1. As a result the Group believed that PS2 may represent a better compromise between provision of some compensation and the technical difficulties in assessing the impact on Consumption BM Units (See Annex G).

The Group considered the potential solutions PS4, PS5 and PS6 and determined that they could all better facilitate Applicable BSC Objectives (c) and (b) as they all promoted effective competition, by moving the risk from the affected Party to the Transmission Company, and in addition incentivised¹³ the Transmission Company to minimise disconnections, where possible, and keep any outage to a minimum.

However in terms of PS5 the Group were concerned about the administrative effort required (and the feasibility) to approve a set of generic administered disconnection prices that reflected a range of potential disconnections for different BM Unit types. As a result

¹³ The Group recognised that the effect of "Settlement Correction" would be seen in the Residual Cashflow Reallocation Cashflow (RCRC) and it was only an "Extra Cashflow" that would be funded through CSOBM, and hence directly involve the Transmission Company. The level of incentive would depend on how the CSOBM costs were recovered by the Transmission Company. This is outside the BSC. In addition the Group recognised that the Transmission Company may also need to take additional balancing actions for the duration of the fault, especially if the affected BM Unit was not expected to trade out of their imbalance.

they believed that PS5 could have a detrimental effect on Applicable BSC Objective (d) and that this could counteract those discussed above (see Section 5.1.2 for more detail).

When considered in terms of Production BM Units, both PS4 and PS6 did not suffer from the disadvantage of needing to agree an ex-ante set of administered prices.

The Group also recognised that in comparison to P87 it would be more difficult to determine whether a Transmission System fault was eligible for compensation. During the Definition Procedure the Transmission Company had indicated it could take up to one working day to determine whether a disconnection was due to the failure of a Transmission Company asset. The Group noted that the affected Party may initially trade out of imbalance before the Transmission Company could determine the fault was eligible. However, the Group believed that the Alternative Modification was resilient to this, as the PS6 mechanism did not require the Party to be contracted for the energy and would allow the Party to retain SSP for the resulting spill. In addition the Party could use the "Extra Cashflow" to recover any losses incurred by trading out of imbalance.

In common with their previous finding in relation to P87, the majority view of the Group was that PS6 would better facilitate the achievement of the Applicable BSC Objectives when compared to PS4:

- (b) as the "Settlement Correction" applies to the full duration, the Party will not be required to decide how to trade out of imbalance. Instead the fault, and resulting imbalance, could be managed by the Transmission Company who could take one set of co-ordinated actions to balance the Transmission System and also manage the imbalance;
- (d) the probability of a Party requiring an "Extra Cashflow" is reduced under PS6, meaning it would probably be less reliant on utilising the Panel claims process and hence would therefore be cheaper and more expeditious than the PS4.

As a result the majority view of the Group was that, for use with Production BM Units, PS6 should be considered as part of an Alternative Modification.

It should be noted that a minority of the Group expressed concern about recommending a solution that attempts to provide compensation for a Party within the BSC, for actions occurring outside the initial BMWP. Especially when the "Settlement Correction" mechanism itself relies on actions outside the BSC in order to ensure the correct data enters the BSC Systems (i.e. PS5 or PS6). This was based on the view that during previous discussions it has been indicated by the Authority that the vires of the BSC only extends for the period within the BMWP. However, the majority of the Group maintained their view (see Section 6.3) that it was important to consider the whole event and that this was consistent with Black Start and also system constraints. In addition this recommendation was consistent with the recommendation produced for P87.

In consideration of Consumption BM Units, the Group confirmed their initial view, contained in the P80 consultation document, that it was not practical to attempt to apply a "Settlement Correction" to data related to GSP Groups, in an attempt to represent what would have been the case if the failure had not occurred. As a result the Group still favoured a solution based on PS1.

However, the Group recognised that the suggested treatment for Production BM Units (PS6) contained the option for an "Extra Cashflow" within the BSC. In order to try and cater

for all possible relevant costs a BM Unit might incur as a result of a Transmission System fault, the view of the Group was that a solution based on PS2 should be considered for Consumption BM Units, thereby allowing them to make a claim for extra compensation if the Party believed it had a strong case. The Group also felt this was in line with the majority of responses, which believed in an "Extra Cashflow", and was also consistent with the recommendation for P87 (i.e. PS6).

As a result of their consideration the Group decided that whilst they could not agree a majority decision in relation to the Proposed Modification (PS5), the majority believed that an Alternative Modification based on PS6 for Production BM Units and PS2 for Consumption BM Units would better facilitate the achievement of the Applicable BSC Objectives.

Furthermore the Group decided that due to difficulties in deciding how to administer the disconnection Bid and Offer Prices, that the Proposed Modification should not be developed further at this stage, and the Group should concentrate on developing an Alternative Modification.

7.3.3 Extra Cashflow

The Group noted that the majority of consultation responses regarding the "Extra Cashflow" had been taken into account in the choice of PS6/PS2.

However, as part of the further development of the solutions associated with PS6 and PS2 the following additional details were considered:

- it would not be realistic to expect a Party to make a claim for "Extra Cashflow" until the Party had seen the outcome of the relevant Settlement Run, including the effect of any "Settlement Correction";
- the Group would have liked the Transmission Company to have the ability to raise a claim, should the Lead Party decide not to. However, as a result of legal advice, received in respect of P87, the Group could not identify the grounds upon which the Transmission Company would raise such a claim. Without access to information relating to the Party's avoidable costs, the Transmission Company could only guess about whether the level of compensation delivered automatically through Settlement was too high;
- legal advice also suggested that, in order to be consistent with existing obligations relating to Black Start, the payment of compensation should only be to the Lead Party, and it should not be possible to result in a charge to the Lead Party (to be paid to the Transmission Company).

7.3.4 Embedded Generation

The consultation responses for both the Definition and Assessment Procedures had shown majority support for compensation being available for any Party that paid for use of the Transmission System.

The Group believed the majority of these responses would intend this to include large embedded Generating Plant that were operating as if they were directly connected to the Transmission System.

The Group also recognised the issue of embedded Exempt Export BM Units, that were netting their production against the demand for the GSP Group and claiming embedded benefits. In such circumstances they would be avoiding use of the Transmission System and hence TNUoS and BSUoS charges. The Group decided that where this was occurring, it would imply non-usage of the Transmission System, and hence they should be regarded as being out of scope for the purposes of compensation. The Group believed this was in line with the consultation responses.

8 FURTHER ASSESSMENT (DURING ONE-MONTH EXTENSION)

Based on the findings of the consultation, the Group had defined a set of requirements to describe a solution using PS6 for Production BM Units and PS2 for Consumption BM Units. The Group had also requested ELEXON's legal advisors for an assessment on producing legal text against this baseline. The initial response was that it was not feasible to draft legal text against the requirements as specified. The identified problem areas were:

- the definition of a "Transmission System fault" and "System Unavailability" was unclear;
- the eligibility of BM Units for compensation was based on TNUoS liability, which is defined outside the BSC, and hence would be hard to reference;
- establishing a causal link between a fault on the Transmission System and an impact experienced by a BM Unit could be difficult. In the case of a Distribution System any link between a physical fault and a measured effect at a BM Unit would need to define the degree of any causation for both the timing and level;
- the basis for triggering a P80 claim was not clear.

The underlying problem was to be able to clearly define the rules by which a claim would be processed and hence reduce the need for the Panel to exercise discretion in processing a claim. This was exemplified by the statement that it is acceptable to ask the Panel a "hard" question, but the Group should avoid asking a "bad" question (which would be one that required a response that was arbitrary). This was a particular concern where Distribution Systems and GSP Groups were involved (See Annex G) as the nature of these faults was more subjective.

These concerns were considered by the Group during the extension to the Assessment Procedure, and although questions about the definition of "System Unavailability" and eligibility could be addressed, the issue of constructing clear rules to establish a causal link for Consumption BM Units (the majority of which are in Distribution Systems and GSP Groups) was a key problem area. The Group had always recognised this would be a major obstacle, but had felt that an attempt should be made to consider how such a causal link could be encapsulated.

The Group originally favoured a solution where the "Extra Cashflow" could be determined by the Panel based on the details raised in each of the individual claims, and hence any compensation could be directly linked to the reported loss. However, in considering the issues raised by the legal drafting the Group recognised that any well defined mechanism for providing compensation for a Consumption BM Unit, beyond retention of spill, would not be able to accommodate the issues raised in Annex G (and elsewhere in the document) and hence would, in most circumstances, deliver compensation that was arbitrary (i.e. the wrong level of compensation for the wrong reasons):

- the Group had always recognised the difficulty in manipulating the result of the imbalance calculations (See [RD/4 Annex B]). It was therefore judged that doing nothing, other than allowing retention of spill (i.e. PS1), might actually be a better approximation to the “correct” level of compensation;
- for SVA BM Units, the risk from a Transmission System fault would be shared, along with other risks (typically of greater magnitude), such that there would be no perceived unhedgeable risk. This perception is further enhanced when it is considered that Suppliers, in general, are responsible for BM Units in a number of GSP Groups (and for the small number of directly connected Consumption BM Units) which further spreads and smears the various out-turn related risks.

As a result the majority of the Group did not believe that in the case of Consumption BM Units it could be shown that BSC Objective (c) would be better achieved with an “Extra Cashflow”. As the risk associated with a Transmission System fault is shared amongst all Suppliers in the GSP Group, it would be difficult to show that the “Extra Cashflow” would improve competition amongst Suppliers. In addition, the difficulty that BSCCo and the Panel would face in determining an equitable level of compensation would be significant and would have a detrimental effect on the achievement of Applicable BSC Objective (d).

In so far as the issue of discrimination was concerned, the Group concluded that the preferred approach enabled the most appropriate level of compensation to be paid to the relevant BM Units, in all cases, at the lowest overall cost, as compared to the status quo and the other approaches considered. Hence, Applicable BSC Objectives are better achieved under an Alternative Modification for P80, based on PS1.

Finally, it was also noted that the distinction in treatment being associated with CVA registered Production BM Units and other BM Units was judged by the Group to constitute the best analogue for the distinction in circumstances, as regards impact under Transmission System fault conditions. However, the Group did recognise that for a small number of BM Units, this analogy would not necessarily hold, although the Group believe this problem to be de-minimis.

As a result the majority view of the Group was that the proposed Alternative Modification should be limited to consideration of BM Units that:

- are Production BM Units;
- are registered with CVA Metering Systems; and
- submit FPNs in accordance with Section Q3 of the Code;

In addition the Group believed that “Settlement Correction” should only be available when the Transmission Company believed, in their reasonable opinion, that it was an eligible Transmission System fault. This would allow “Settlement Correction” to be applied without the need for the Panel to rule on a claim, and would minimise the risk of “Settlement Corrections” being applied after the Initial Settlement Run (i.e. SF).

Where a Lead Party disagreed with the Transmission Company and believed, in their reasonable opinion, that an eligible BM Unit was indeed affected by a Transmission System fault, then they could raise a claim for an “Extra Cashflow”. The claim could include any imbalance costs the Party had experienced as a result of not having “Settlement Correction”. The Group believed that in the case where the cause of the Transmission

System fault was not clear, then a Party would have in all likelihood traded out of imbalance soon after the fault had occurred, thus minimising their exposure to Trading Charges.

Furthermore the Group recognised that even when a Transmission System fault was eligible, and scheduled for "Settlement Correction", that a Party may still trade out of imbalance. However, the Group believed that the Alternative Modification was resilient to this, as the PS6 mechanism did not require the Party to be contracted for the energy and would allow the Party to retain SSP for the resulting spill.

The full description of the Alternative Modification is contained in Table 5.2. In considering the Alternative Modification the Group believed it would better facilitate the achievement of Applicable BSC Objectives (b) and (c) for the reasons given in Section 5.2.2.

9 IMPACT ON BSC AND BSCCO DOCUMENTATION

This section describes the changes required to the Code for the Alternative Modification. There is no legal text for the Proposed Modification.

9.1 Alternative Modification

The legal text for P80 has been drafted independently to the text provided for either Proposed Modification P87 or Alternative Modification P87. However, a lot of paragraphs are common to the two, and this has been managed by placing the suffix "A" to some of the paragraph numbers in the legal text for P80. Therefore it can be seen that paragraph O9.2.1 for P87 is similar to Q9A.2.1 for P80.

The draft legal text has been through an initial review by the Group and meets the overall intent of the Alternative Modification. However, this is complex legal text and further reviews will be performed before it is issued for consultation during the Report Phase.

9.1.1 BSC Section Q

Section Q will be updated to include:

- details of how the Transmission Company establishes:
 - which BM Units are "Eligible BM Units";
 - the Transmission System faults that are to be classed as "System Faults";
 - which "Eligible BM Units" are affected by a "System Fault" and are "System Fault-affected BM Units";
 - the duration of any "System Fault", to be called the "System Fault-affected Period";
 - the Settlement Periods affected by a "System Fault", to be called "System Fault-affected Settlement Periods";
- details of how the Transmission Company will notify BSCCo of relevant information as soon as reasonably practical after a fault occurs;
- a description of the "Settlement Corrections" to be made for "System Fault-affected BM Units", including the MWh volume to issue a contract notification against;

- details of making a claim for “Extra Compensation” should a Party believe it has been disadvantaged (after any “Settlement Correction”). The amount payable will be determined from:
 - i. “Avoidable Costs” as described in Section G2 of the Code;
 - ii. lost revenue from any potential actions for balancing services and BM activity. The cost of any lost opportunity associated with balancing services will be based on the historical information supplied from the generator with similar information supplied from the Transmission Company as well;
 - iii. any Trading Charges incurred, i.e. Non-Delivery Offer, or Bid Charges, and any outstanding imbalance;
- the extra compensation paid will form part of CSOBM and hence recovered from the Transmission Company.

9.1.2 BSC Section X

The new definitions for “Eligible BM Unit”, “System Fault-affected BM Unit”, “System Fault-affected Period”, “System Fault-affected Settlement Period” and “Avoidable Costs”.

9.1.3 BSCCo Documentation

ELEXON will be required to draft Local Working Instructions to ensure that the processes for the “System Fault-affected Period and the entering of ex-post contract notifications into Settlement Administration Agent (SAA) are documented.

As a result of drafting these documents it may become apparent that a subset of the information should reside in a BSC Procedure (BSCP). Should this occur then the process associated with the creation of a new BSCP may mean that an approved version was not available in time for the Implementation Date, and would need to be released at a later date.

10 IMPACT ON BSC SYSTEMS

The impact on the BSC Systems is limited to the implementation of the process changes associated with “Settlement Corrections”. Neither the Proposed nor Alternative Modification required software changes to the BSC Systems and any changes are limited to the implementation of manual processes, which it is expected would be executed infrequently.

10.1 Proposed Modification

The manual process would be similar to existing Workaround 18 (BMRA Data Corrections), which is capable of amending the Settlement data associated with BOAs issued by the Transmission Company.

10.2 Alternative Modification

The manual process would be similar to Energy Contract Volume Aggregation Agent (ECVAA) System failure process whereby ex-post Energy Contract Volume data is entered into ECVAA.

The BSC Agent impact assessment (Annex C) notes that a cleaner mechanism to input “Settlement Corrections” into the BSC Systems would be provided by the proposed solution for P34/P36/P71. This could be considered during implementation should one of these Modifications be approved.

11 IMPACT ON CORE INDUSTRY DOCUMENTS AND SUPPORTING ARRANGEMENTS

11.1 Transmission Company

No explicit changes for P80 have been identified to the Grid Code or any other related Transmission Company documentation. However, as stated in Section 14 the Transmission Company has a number of new obligations, which they may decide need to be reflected in Core Industry Documents.

12 IMPACT ON ELEXON

ELEXON will need to develop detailed processes to be used for P80, and document them in Local Working Instructions (LWI).

Although Transmission System faults are expected to be rare occurrences, it is important to have a clear and transparent process for dealing with any eventualities, especially as the Party may be exposed to continued imbalance risk in the short term.

There will need to be procedures for each of the three different phases of an incident listed below, and a number of sub-processes within each of these:

- **Transmission System fault notification** - including processes to handle any enquiries related to an incident and keep Parties and BSC Agents informed of progress. This will include ensuring the relevant Party gets sufficient notice of when a fault is to be cleared¹⁴. In preparation for the subsequent phases it will be necessary to collate a clear view of what occurred and when. This needs to include details of the contract notifications to be applied to Settlement by the Transmission Company. This will need to be documented and used as the basis for administering the rest of the process¹⁵;
- **Settlement Correction** – although ELEXON will not be directly involved in making any corrections, it is important to ensure the SAA are clear about the correction to be applied, based on the document described above. Once complete it will be necessary to ensure the correction occurs in the desired Settlement Runs and has the predicted effect;
- **Extra Cashflow** - including processes to receive claims for extra compensation (This may include a BM Unit not already compensated under the previous procedure). Once submitted it will be necessary to administer the claims process, including collecting additional information from the Transmission Company and any affected Distribution System Operators. It will be necessary to manage the claims process through the Panel, providing guidance on how to interpret the supplied data and form a decision on

¹⁴ This should recognise ELEXON does not provide a 24x7 operation and hence must not interfere with the actual administration of the fault. It should also be noted that in the case of a fault impacting a Distribution System then it may be that the Distribution System Operator is the relevant Party.

¹⁵ Although it would be helpful to get agreement from all Parties at this stage, as this may reduce the likelihood of a claim for additional compensation, it is the Transmission Company's view that should prevail.

the compensation to be paid (if any). Finally it will be necessary to implement the Panel decision;

The ELEXON impact assessment (Annex E) estimates this will take a minimum of 7 weeks on top of the 6 weeks quoted by the BSC Central Service Agent.

13 IMPACT ON PARTIES AND PARTY AGENTS

P80 does not change any of the BSC Systems or their interfaces and hence Party Agents should not be affected.

As a result of a Transmission System fault occurring, a Party may take additional actions to ensure they continue to submit data to the Transmission Company and BSC Systems, which represents what it had intended prior to the fault. Consideration of any impact on trading systems used by Parties is outside the scope of the assessment of P80.

14 IMPACT ON TRANSMISSION COMPANY

The Transmission Company make four key points or assumptions in their impact assessment¹⁶:

- that it would be their preference for any "Settlement Correction" to be applied outside control room timescales and hence ex-post;
- that any "Extra Cashflow" should be defined outside the BSC and that, if defined inside the BSC, it may result in alignment problems with the current methods for BSUoS;
- their belief that P80 was only an interim solution prior to transmission access provisions within CUSC;
- the changes to their systems would require a minimum of a 1 month lead time;

The following aspects of the proposed solutions (See Tables 5.1/5.2) may require actions by the Transmission Company:

- for any incident the submission of information to BSCCo detailing the nature of a Transmission System fault, the affected BM Units, the duration of the physical fault, the earliest time a BM Unit will synchronise to the Transmission System and the expected time to return to their prevailing Physical Notification in line with their associated dynamics;
- the process whereby a BM Unit submits Physical Notifications and changes to the Dynamic Data Set during a "Transmission System fault-affected Period". The Transmission Company may need to consider any safeguards to stop an affected Party exploiting their power¹⁷.
- the submission of "Settlement Correction" data to BSCCo;

¹⁶ This is in addition to the statement in their consultation response that they believed a PS4 style solution best facilitates the BSC objectives as it would remove imbalance from the affected party in the most economic manner. In addition they believe PS5 / PS6 are both ultra vires as they deal with compensation outside the governance of the BSC

¹⁷ Grid Code consultation F/02 was issued on 01 November 2002 and contains measures for P87 to control a "Intertrip-affected BM Unit's" Physical Notifications during an "Intertrip-affected Period".

- The Transmission Company is required to respect a BM Unit's Dynamics Data Set once the fault has cleared. However, as "Settlement Correction" is linked to the delivered MW output and not the defined run-up profile at the end of the fault, there maybe a need for the Transmission Company to ensure a BM Unit returns to service as agreed;
- the submission of details related to a Party's claim for an "Extra Cashflow", such as historical information on the potential lost opportunity associated with Balancing Services;
- any changes required to recover "Extra Cashflow" costs included in CSOBM¹⁸.

As part of defining processes for these the Transmission Company may need to make changes to Core Industry Documents and supporting arrangements (See Section 10).

Further details on the Transmission Company's Impact Assessment are contained in Annex D.

15 PROJECT BRIEF

The Central Volume Allocation (CVA) BSC Agent's high level impact assessment stated that to document the processes to carry out ex-post notifications or acceptances would cost £30,000. Furthermore, it would cost approximately £2,000 per incident (see Annex C).

In addition the impact assessments establish that it will take the CVA BSC Agent 6 weeks to develop their changes, and a minimum of 7 weeks (i.e. a total of 13 weeks) to develop the necessary BSCCo documentation and processes. In addition the ELEXON impact assessment proposes that this work is performed as a part of a planned release within the CVA Release Programme. Therefore the earliest achievable release is planned for 24 June 2003, should an Authority determination be received before 24 February 2003.

The Group were concerned that this was not consistent with P87, where the recommendation was for an Implementation Date of 30 Working Days after an Authority determination. However, P80 is a more complex modification as it is triggered on a wider range of fault causes and Transmission System assets, and more BM Units are eligible. Therefore delivering P80 as part of the CVA Release Programme would reduce the risk, especially as Transmission System faults, although rare, are more likely than intertrips, and that P80 is not subject to a sunset clause.

The changes for P80 would be developed by the ELEXON CVA Programme, high level details of which are provided in Annex E.

ANNEX A - PROPOSED TEXT TO MODIFY THE BSC

For the reasons discussed in this document the legal text for the Proposed Modification has not been drafted.

Legal drafting for the Alternative Modification is attached as a separate document.

¹⁸ The Transmission Company indicated in relation to P87 that this may require a Transmission Licence change in order to allow BSUoS to include the updated derivation of CSOBM.

ANNEX B - P80 CONSULTATION RESPONSES

Attached as a separate document.

ANNEX C - BSC AGENT IMPACT ASSESSMENT

NETA Change Form	MP/CP/TP No: MP80 and MP87
	Logica reference: ICR410
Title: P80 'Deemed Bid/Offer Acceptance for Transmission System faults' and P87 'Removal of Market Risk Associated with Operation of a Generator Inter-Trip Scheme'	
Identified by: ELEXON	Date received: 15/8/2002

Statement of requirement
Baseline affected: NETA Service Definition Baseline (V1.0)
Assumed changes over baseline: None
Description of Change: See attached Modification Proposals P80 & P87 - Consultation Paper
Proposed solution: See attached Modification Proposals P80 & P87 - Consultation Paper
Justification for Change: See attached Modification Proposals P80 & P87 - Consultation Paper
Proposed changes to Service Levels: None
Proposed changes to the Agreement: None
Attachments/references: Modification Proposals P80 & P87 - Consultation Paper

To be completed by Logica			
	High Level Impact Assessment	Detailed Level Impact Assessment	Quotation
Tick which stage is being completed:	✓		
Signed by Logica Contract Manager:			
Date:	29/8/2002		
HLIA category: Small/Medium/Large/Other		Price for DLIA:	
If this is a Quotation, are consequential modifications needed to the DLIA?			Yes/No.

Logica's proposal	
<p>Logica's understanding of the requirement:</p> <p>P80 - Deemed bid/offer acceptance for transmission system faults Where a BM Unit is forced to deviate from Physical Notification due to faults on the transmission system outside its control, the TC should be obligated to issue a deemed bid-offer acceptance reflecting the forced deviation, for as long as the situation continues. The BSC only covers obligations in relation to inter-trips. This proposal seeks to include all other system faults outside the control of the BM Unit Lead Party.</p> <p>P87 - Removal of market risk associated with operation of a generator inter-trip scheme The compensation payable following a generation inter-trip scheme is currently achieved, where applicable under the Grid Code, via a deemed bid acceptance. This proposal seeks to remove the problems associated with this solution, namely windfall gains and setting extreme negative values of SSP, by issuing contract notifications retrospectively to remove the imbalance exposure associated with the trip. This proposal also recommends that, where the commercial consequences of the inter-trip operation are not covered by a Balancing services contract then a claim can be made via the TDC to recover the costs.</p>	
Logica's proposed design solution:	
See attached P80/P87 Design Solutions	
Consequential changes to Project Deliverables:	
Document Changes for ECVAA, SAA	
Consequential impact on BSC Service Users or Other Service Providers:	
None.	
Testing strategy:	
N/A	
Management plan for developing the Change:	
Project plan for developing the Change:	
The development of this change is expected to take 6 weeks	
Method of deployment:	
N/A	Is a planned outage required? No

Price for Design and Build:		
Item description:	Price (ex VAT)	Type of price:
Develop and document formal processes	£30,000	Fixed
Price for Operate and Maintain:		
Item description:	Price (ex VAT)	Type of price:
Operate per incident	£2,000	T&M
Maintain	£0	Fixed
If this is a DLIA or Quotation, is a price breakdown in the agreed format attached? N/a		
Terms attaching to the offer		
Validity period of offer: 30 days	Type of offer: Indicative	
Assumed start date:		
Payment milestones: Logica will invoice in full on completion of development. For the operate it is suggested that this is charged under T&M arrangements at rates applicable at the time and invoiced in the month following the incident.		
Document turnaround time: N/A		
Impact on Service Levels: None		
Impact on performance of the System: None		
Other terms:		
If this is a Quotation, is a draft contract amendment attached? Yes/No		
Responsibilities of ELEXON:		
<ul style="list-style-type: none"> • Within reasonable levels, ELEXON will make available appropriate staff to assist Logica during the development of this change. • For all DCRs which are subject to review, Logica shall provide one draft issue and a maximum of 5 working days has been allowed for ELEXON to review and comment on the updates. Comments will be addressed and the final issue will be provided. A maximum of 2 working days has been allowed for review confirmation and signoff by ELEXON. 		
Assumptions made by Logica:		
<ul style="list-style-type: none"> • No changes to the software are required. • No account has been taken for any additional effort required to operate, such as determining the numbers to be entered when an incident occurs or for extracting from the database an ad hoc report of what's on the database (e.g. screenshots) • No allowance is included for any participant involvement. • Price excludes provision for indexation of daily rates from 1st April 2003. • Price is for creating DCRs, not a formal documentation issue. • No allowance is included in the price for Service Descriptions being different from the Change/Modification Proposal. 		
Options and alternatives:		

Design Solutions
P80 / P87
Document Changes

	BMRA	CDCA	CRA	ECVAA	SAA	TAA
URS				Y	Y	
SS						N/A
DS						N/A
MSS				Y	Y	N/A
OSM				Y	Y	

IDD	Part 1 document	
	Part 1 spreadsheet	
	Part 2 document	Y - new manual flows
	Part2 spreadsheet	

Software Changes

1. none
- 2.

Other Changes

1. Define formal process which combines the submission of an Energy Contract Volume Notification Authorisation and an Energy Contract Volume Notification under that Authorisation. It is expected that the Notification will be in the past. The Authorisation will be between a Participant Energy Account and a System Operator Energy Account. (Note that Authorisations can only be effective from the following calendar day at the earliest and so the process will have two separate parts).
2. Define formal process for manual notification of a Bid-Offer Acceptance which combines insertion of one (or more) Acceptances [note that the maximum Acceptance duration is 4 hours], and the change of Bid and or Offer Prices for the period of the notification to zero or other value as notified.

Notes

1. Only part 2 of the IDD is impacted as the new flows will come from either the SO or from BSCCo.
2. When issuing an Acceptance, the Bid price will need to be amended to zero too. Note that where the new bid starts part way through a period and there are earlier genuine bids within that period too, the actual price for that period may need to be set so that the cash flow is correct (unless this cash flow is handled by another mechanism)
3. In order to adjust a participant's Account Bilateral Contract Volume (QABC), a Notification is required between that Account and some other Account. It is assumed here that the other Account will be one of the System Operator's non- IEA Accounts - any contract volumes for these are reported but not otherwise used in Settlement.
4. The two mechanisms described above are being used to ensure the participant does not suffer from Imbalances (Information or Energy) as a result of the "trip". A cleaner solution would be to adjust the notified and contractual position using the mechanism proposed in P34, P71 and P36Alt where the adjustment volume would be included in QAS. To facilitate this, either the BSAD statement would need to include failures as ancillary services (it may do anyway) or a flag added to the flow as part of development of the solution which would indicate whether the volume was ancillary service of compensation adjustment. At this stage the modifications are awaiting Authority Determination and so this solution is not available, that solution could only be used if one of P34/P36A/P71 were approved as P80/P87 do not justify development effort.

Testing

The new procedures would be tested using a test system to confirm that the requested updates could be entered as defined.

ANNEX D - TRANSMISSION COMPANY IMPACT ASSESSMENT

Modification Proposal P80 and P87 seek to change the current compensation arrangements for system faults and certain generation operational intertrips, respectively. System faults and intertrips are rare, therefore no changes to the BSC Central Systems are proposed. The potential solutions seek to manually remove a participant's imbalance by changing Settlement data, either via (i) Bid Offer Acceptances (BOAs) or (ii) Account Bilateral Contract Volume (QABC) notifications. Please state the impact on the Transmission Company to develop processes to carry out these manual corrections. It is assumed that manual changes using BOAs could take place via a similar mechanism to WO18, and changes using QABC could follow a similar procedure to ECVA System Failure. Any corrections to Settlement that can be carried out via ex-ante actions will be undertaken when possible to minimise ex-post actions. An "Extra Cashflow" may also be required to further compensate parties for intertrips of system faults and this would be paid by the Transmission Company and recouped through BSUoS charges.

Correction to Settlement		Impact on the Transmission Company
Ex-post for BMWP	BOA	It would be our preference for any correction to be done ex-post as this could be done outside Control room timescales and would avoid placing additional pressures on Control during a system incident.
Ex-post for BMWP	QABC	It would be our preference for any correction to be done ex-post as this could be done outside Control room timescales and would avoid placing additional pressures on Control during a
Ex-ante outside BMWP	BOA	It would be possible to carry out Ex-ante BOA correction within Control room timescales although the mechanism would be cumbersome as it would involve a procedure to accept BOAs throughout the required timescales. Therefore, should we be required to carry out BOA acceptance outside the BM we
Ex-ante outside BMWP	QABC	Currently we do not carry out procedures of this nature within control room timescales so this would prove to be difficult to implement.

What are your views on the implementation of an "Extra Cashflow" and whether this should be defined inside or outside of the BSC?	As discussed in the consultation responses, we believe that any extra cashflow should be defined outside the BSC and our preferred route for extra cashflow would be via a Balancing Services contract. We are not sure how an extra cashflow that has been defined under the BSC could be administered as this would not align with our current methods for payments via BSUoS.
Do you have any further comments on the implementation for P80 and P87?	As we believe that any changes implemented due to these modifications would be as an interim solution prior to Transmission Access we do not believe that any change should involve major system changes and should be effected via a manual work around. We would require a minimum of 1 month lead time to put any procedures and processes in place.

ANNEX E - ELEXON IMPACT ASSESSMENT

Mod No.	P80	Title:	Deemed Bid Offer Acceptance for Transmission System faults			
Assessor Name	Phil Clinch	Assessor Team	CVA Programme (formerly BSC Systems Delivery Programme)	Date	8 th September 2002	
Modification Summary: see modification						
<p>Summary of solution(s): INITIAL ASSESSMENT: This Modification requires processes to be put in place to deal with relatively infrequent incidents relating to Transmission Faults. There are no changes required to Central Services Software systems. However there are changes required to the ECVAAs (Alternative Modification) or SAA (Proposed Modification) documentation to incorporate the processes to deal with the compensation for instances of Transmission System Faults.</p> <p>ELEXON will also be required to create processes for P80 and to interact with the Transmission Company and the Central Services Provider and impacted Parties. ELEXON will be required to maintain a database of eligible BM Units, to receive updates from the Transmission Company and to verify these against CRA data. ELEXON will need to manage the processes relating to Transmission Faults. This includes notifications associated with the faults, ensuring that corrections are made in the appropriate Settlement runs and managing any claims for compensation including gaining authorisation from the Panel.</p> <p>The BSC will be impacted and a new BSCP may be required. The work would be Low Risk (as only processes are affected and no 'real time' activities), Low Impact, Medium Cost and Medium Complexity.</p>						
Product Affected Reference				Target Issue		
This should include: <ul style="list-style-type: none"> • Impact on NETA Services Documentation <ul style="list-style-type: none"> • SAA • ECVAAs • Code and Code Subsidiary Documents <ul style="list-style-type: none"> • BSC Section Q • BSC Section X • Possibly a new BSCP • Testing <ul style="list-style-type: none"> • Walkthrough of the new BSCP (if required) • Business definition documents (review) <ul style="list-style-type: none"> • BPM • Other <ul style="list-style-type: none"> • ELEXON Local Working Instructions 				Decision + Logica timescale + 7 weeks min		
Additional Project documentation <ul style="list-style-type: none"> • Release plan (assume part of planned release) 						

<ul style="list-style-type: none"> • Test Strategy (assume part of planned release) • Business Requirements Solution • Deployment Plans (part of planned release) 		
Additional Audit activities (PwC)?		
Impact on other Systems – Transmission Company systems		
Assumptions – 1. Assumed part of a planned release and does not require a separate BRS, Test Strategy, Plan and deployment plan; 2. No additional analysis is required once Mod approved i.e the analysis in the requirements spec 3. Implementation timescale needs to allow for adequate regression testing and participant testing – see previous assumption.		
Issues and Risks –		
Related CPs and Modifications Modification P87		
Comments TIMESCALE – Decision plus the Logica development timescale + 7 weeks Min		

ANNEX F – TRANSMISSION SYSTEM FAULT STATISTICS

Transmission System faults are considered to be rare, but can be significant events. A number of Transmission Company produced reports give an indication of the level of Transmission System incidents that have occurred over recent years.

A report on the Transmission Company's performance during 2000-2001 [RD/5] provides statistics on System Security. This states that:

During 2000-01 there were over 300 system trips where transmission circuits were disconnected either automatically, or by urgent manual switching. This is a typical number for an average year. 40% of which were caused by adverse weather conditions. The vast majority had no impact on electricity users.

Of these events, only three were loss of supply incidents. Two occurred during lightning storms.

The total Estimated Unsupplied Energy during 2000-01 was 526MWh.

This report also provides details on incidents related to previous years (shown in table F-1). Details on those incidents marked (*) are provided in the relevant reports.

Table F-1 – Loss of Supply Incidents

Year	Incidents	Average Unsupplied Energy per incident (MWh)	Average Incident Duration (Mins)
2000-01	3*	175	68
1999-00	4	73	48
1998-99	5	7	11
1997-98	14	32	18
1996-97	14	6	7
1995-96	5	34	26
1994-95	8	10	7
1993-94	8	60	25
1992-93	9	80	34
1991-92	9	24	30

These reported incidents only relate to a loss of supply, and do not include disconnection of generation. Details of these are reported in relation to the Balancing Principles Statement [RD/7] or the subsequent report to the Authority [RD/8] and are shown in table F-2.

Table F-2 – Disconnections of Generation

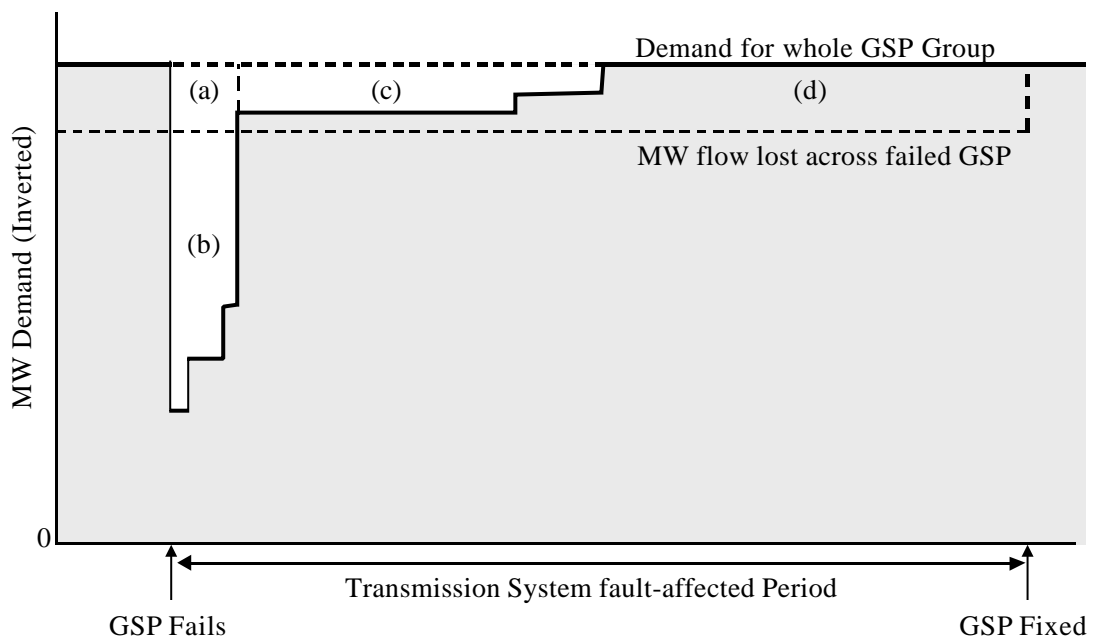
Year	Incidents
2001-02	1*
2000-01	2
1999-00	0
1998-99	0
1997-98	5

ANNEX G – GSP GROUPS AND DISTRIBUTION SYSTEMS

Section 6.4 describes some of the issues concerning the impact on a Distribution System and GSP Group of a Transmission System fault, especially when the loss is coincidental with other faults within the Distribution System(s) for that GSP Group¹⁹. This Annex has been created to expand on these and give an indication of the scale of the problem to be addressed.

Figure G-1 shows how the demand profile for a GSP Group may vary in the case where there is both a Transmission System fault and a number of other faults within the Distribution System. The shaded area represents the remaining demand, which for the purposes of the example is considered to represent a constant demand profile. The horizontal dotted line “MW flow lost across failed GSP” represents the MW level that was flowing across the Grid Supply Point (GSP) prior to the fault.

Figure G-1 – Example Distribution System Fault



Immediately after the Transmission System fault occurs the example assumes that a number of Distribution System faults also occur. These may be either cascade failures due to the loss of the GSP, or else independent, but co-incidental, faults (i.e. widespread storm damage). In either case the faults are not considered to be part of the Transmission System fault, nor eligible for compensation.

In such a scenario it may be reasonable to assume that area (a) was due to the Transmission System fault, whereas area (b) was due to the other faults in the Distribution System. Such a view may be considered self-evident, but would still be subjective. It may be that due to the resilience provided by other GSPs that the majority of area (a) was also due to co-incidental faults within the Distribution System.

The problem gets more complex, and subjective, when considering area (c), which may represent an area of the Distribution System islanded due the failed GSP, or alternatively

¹⁹ With the introduction of P62 there may be multiple Distribution Systems with a single GSP Group.

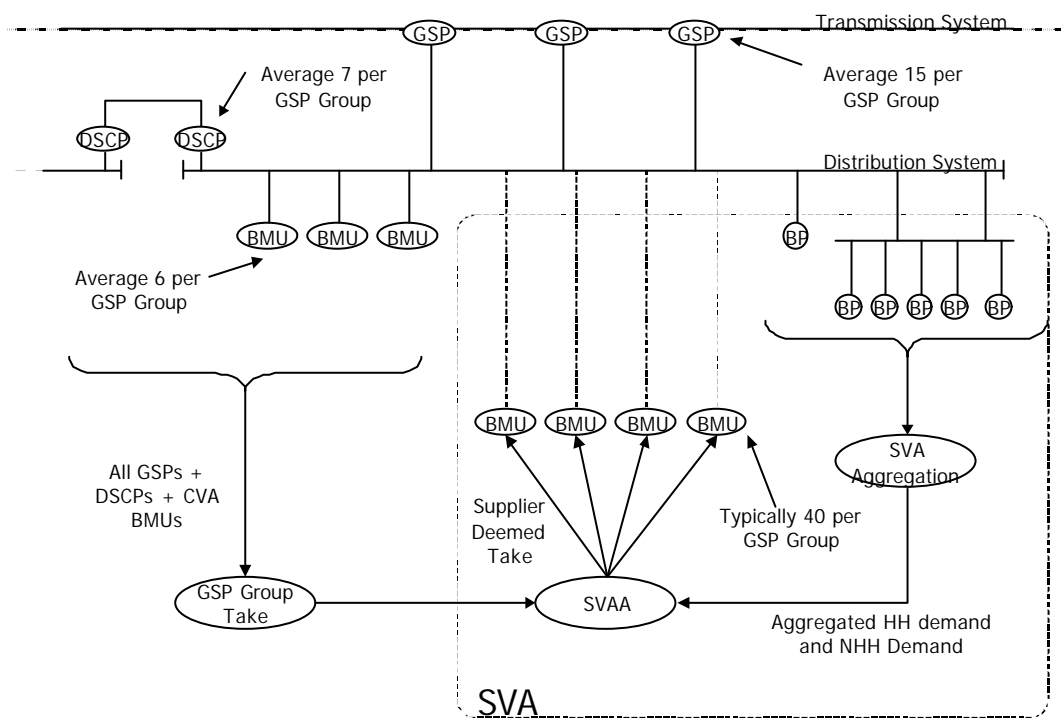
co-incident faults deep within the Distribution System. Any estimate for a split can only be a subjective view obtained from the relevant Distribution System Operator.

It should be noted that area (d) relates to the period where the GSP is still physically disconnected, but re-routing within the Distribution System means no customers remain disconnected.

In a real case these difficulties would be increased as the underlying demand profile would not remain constant. Within the assessment of P80, establishing that an impact on a BM Unit within a Distribution System was actually caused by the identified Transmission System fault, has been referred to as the “causal link”. From the perspective of the legal drafting it is necessary to clearly establish such a link in order to: minimise the level of subjective judgement that may be vested in the Panel; and for any award of compensation not to appear arbitrary. This matter is clouded further by the effect of GSP Groups.

Once an estimate for the loss attributable to the Transmission System fault has been obtained, it is also necessary to determine its impact within an SVA GSP Group. GSP Groups allow a large number of Metering Systems to be aggregated into manageable groupings, and also support the profiling of Non Half Hourly Metering Systems. Figure G-2 provides a representation of the relationship between a physical Distribution System and the Supplier Volume Allocation (SVA) function.

Figure G-2 – Calculation of Supplier Deemed Take



The Boundary Point (BP) metering for the vast majority of Metering Systems occurs within SVA. The individual Metering Systems are aggregated by either Consumption Component Class (Half Hourly Metering Systems), or Supplier Purchase Matrix (Non Half Hourly Metering Systems). In each case this means that any indication of which physical Metering Systems are affected by a fault is lost before data is submitted to the central BSC Systems. The SVA Agent (SVAA) allocates to the appropriate Suppliers, the half hourly metered

Consumption, and the non half hourly estimated Consumption. At this point the estimated Consumption would represent the profiled values assuming the fault had never occurred. Within SVAA the non half hourly estimated Consumption is then scaled back, by comparing it to the GSP Group Take (the metered volumes at the GSP, any Distribution System Connection Points (DSCP) and the CVA registered BM Units) minus the half hourly metered Consumption (which will also show the effect of the fault).

This means that the effect of any fault will be smeared across all the Supplier BM Units with non half hourly Consumption. In addition any detail of which SVA half hourly customers are affected will be lost within the aggregation function, although the aggregated total for that Supplier will show the degree to which the failure affected that Supplier.

Within a GSP Group the flow at any individual GSP is on average less than 100MWh in a Settlement Period. This typically represents less than 6% of the GSP Group Take, even less if resilience within the Distribution System reduces the impact of the failure. Taking into account the manner in which this must then be apportioned to each of the Suppliers within the GSP Group, it could be asserted that the level of error associated with this process within a single GSP Group, is both arbitrary and also comparable to the level of error that Supplier's must normally work within when predicting their demand profile across all GSP Groups. This is the problem that must be considered within the Assessment Procedure for P80.

Another example of the potential impact is given by the Transmission Company in their consultation response, which is reproduced in Section 7.1.2.2.