ANNEX 4 – POTENTIAL ALTERNATIVE MODIFICATION TO P135

The PSMG met on 21 August 2003 to discuss a potential Alternative Modification raised by one of the group, noting that any Alternative Modification is required to address the same defect as the Proposed Modification, and to better facilitate the Applicable BSC Objectives than the Proposed Modification.

SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

As far as BSCCo has been able to assess the following parties/documents have been initially identified as being potentially impacted by Urgent Modification Proposal P135.

Parties		Sections of the BSC		Code Subsidiary Documents	
Suppliers	☒	A	☐	BSC Procedures	☐
Generators	☒	B	☐	Codes of Practice	☐
Licence Exemptable Generators	☒	C	☐	BSC Service Descriptions	☒
Transmission Company	☒	D	☐	Service Lines	☐
Interconnector	☐	E	☐	Data Catalogues	☐
LDSOs[1]	☐	F	☐	Communication Requirements Documents	☐
Party Agents		G	☐	Reporting Catalogue	☐
Data Aggregators	☐	H	☐	MIDS	☐
Data Collectors	☐	J	☐	**Core Industry Documents**	
Meter Operator Agents	☐	K	☐	Grid Code	☐
ECVNA	☐	L	☐	Supplemental Agreements	☐
MVRNA	☐	M	☐	Ancillary Services Agreements	☐
BSC Agents		N	☐	Master Registration Agreement	☐
SAA	☒	O	☐	Data Transfer Services Agreement	☐
FAA	☐	P	☐	British Grid Systems Agreement	☐
BMRA	☐	Q	☐	Use of Interconnector Agreement	☐
ECVAA	☐	R	☐	Settlement Agreement for Scotland	☐
CDCA	☐	S	☐	Distribution Codes	☐
TAA	☐	T	☒	Distribution Use of System Agreements	☐
CRA	☐	U	☐	Distribution Connection Agreements	☐
Teleswitch Agent	☐	V	☐	**BSCCo**	
SVAA	☐	W	☐	Internal Working Procedures and Systems	☒
BSC Auditor	☒	X	☐	**Other Documents**	
Profile Administrator	☐			Transmission Licence	☐
Certification Agent	☐				
MIDP	☐				
TFLA	☐				
Other Agents					
SMRA	☐				
Data Transmission Provider	☐				

[1] Licensed Distribution System Operator

a Options for a Potential Alternative Modification

The following options have been identified which may form a potential alternative to Proposed Modification P135. Each option seeks to extend the solution for P135, namely the application of a marginal System Buy Price where the Net Imbalance Volume (NIV) is positive (i.e. system is short), by additionally proposing that:

a) All Offer Acceptances in the Settlement Periods comprising a Demand Control Period are paid at the (marginal) System Buy Price; and / or

b) The volume associated with demand control be included in the Offer stack for Net Imbalance Volume Tagging.

b Addressing the Same Defect as Proposed Modification P135?

The proposer of these options noted that they believe these address the same defect as P135 because P135 has been interpreted as addressing the defect of security of supply by using a marginal price to send price signals that incentivise forward contracting to ensure that generation meets demand.

The proposer believes that a marginal System Buy Price (calculated with the demand control volume in the Offer stack for Net Imbalance Volume Tagging) plus marginal Offer payments during the Demand Control Period addresses the same defect as P135, and thus can be considered to be an Alternative to P135.

A number of PSMG members do not believe that the proposed options address the defect of Proposed Modification P135, as P135 limits the scope of the Modification to the marginal System Buy Price only, retaining the 'paid as bid' aspect of the Balancing Mechanism and the current treatment of the volumes associated with demand control. Section 3.2 of the draft Urgent Modification Report explores the rationale for this choice in more detail, but effectively the limitation of scope is due to the urgency of the Modification and the requirement to implement a solution in time for this winter.

However, the majority of the PSMG agreed that both of these options address the same defect and therefore should be assessed against the Proposed Modification to determine if they better facilitate the Applicable BSC Objectives than the Proposed Modification.

c Facilitating the Applicable BSC Objectives

In respect of whether the options better facilitate the Applicable BSC Objectives than P135, the proposer of the options believes that they are better than P135 because:

- The marginal price derived by P135 does not include the volume associated with demand control in the Energy Imbalance Price calculation, this may have the effect of weakening the marginal System Buy Price derived and, in extreme cases, making the system appear to have been long (discussed in more detail in section 4.1.2). Therefore including the volume associated with the demand control in the stack for NIV Tagging will derive a more "correct" (marginal) System Buy Price than P135, sending more accurate price signals;
- The 'paid as bid' aspect of P135 disincentivises Generators because (the following points are discussed in more detail in sections 4.1.2 and 4.1.3) generating close to capacity during Demand Control Periods places risk on a Generator in the event of trip during a this period, as a Generator will be exposed to a marginal System Buy Price for the full extent of the lost contracted volume, furthermore, the non Delivery of the Accepted Offer volume will incur the marginal System Buy

Price for the non delivered volume. Thus the potential risk on a generator is perceived to be too high with limited ability to mitigate the risk.

The proposer of the options believes that this may cause Parties (that can) to withhold generation / plant for self balancing purposes, recognising that although this is in breach of the Grid Code, Parties may be incentivised to do so by the increased risk of exposure to high SBP, and those Parties that cannot self balance may choose not to generate at all, thus further degrading security of supply.

The proposer of the options believes that paying for accepted Offers at the marginal System Buy Price means that generators will be better able to manage the risk of trip at times of demand control, and will be incentivised to offer into the Balancing Mechanism, thus improving security of supply over the Proposed Modification P135.

The PSMG considered these views. A number of the PSMG did not agree that the options for the potential alternative Modification are better than the Proposed Modification and provided the following rationale:

- The difficulty associated with determining the volume delivered by demand control means that the volume placed into the Offer stack for NIV Tagging will be inexact;
- Paying Offers at the marginal System Buy Price would incentivise generators to withhold generation from the forwards and spot markets, so that they could offer into the Balancing Mechanism and get the marginal price for all their generation; and
- Paying Offers at the marginal System Buy Price makes Offers neutral to non delivery, and this may create the potential for 'false' Offers. For example, a Supplier offers into the Balancing Mechanism in anticipation / on the off chance of an imbalance in the 'right' direction that looks as if the Offer was delivered, thus being paid the marginal SBP for that accepted Offer volume, whilst not actually delivering the Offer.

However, the PSMG did not reach any conclusion as to whether either or both options plus the marginal System Buy Price, form an Alternative Modification which better facilitates the Applicable BSC Objectives than Proposed Modification P135, but agreed that the options comprising the potential alternative should be consulted on as part of the consultation on P135, in order to seek industry views. The consultation can then be considered by the PSMG when completing the assessment of P135, and making their final recommendations to the Panel.

d Technical Solution for the Potential Alternative to P135

For the reasons set out in section 3.3 it is proposed that any solution to P135 be implemented as a workaround, with a view to making it as robust as possible. It should be noted that the following solution assumes that both options (a) and (b) comprise the Alternative Modification, in order to enable assessment of the 'most effort' solution.

The following process is proposed:

1. Where the Transmission Company instructs demand control in accordance with the Grid Code OC6.1.2 (c), (d) or (e), where such demand control is required for the purposes of insufficient generation to meet demand in real time (and under no other circumstances), the Transmission Company will send, as soon as practicable after the instruction is issued, a System Warning Message to the Balancing Mechanism Reporting Agent (BMRA), stating the time that demand control was instructed (the start of the demand control period), and the GSP Group affected by the demand control;

2. The BMRA will publish the System Warning within five minutes of receipt (current service levels) on the 'System Warnings and other Messages' screen;

3. When the period of demand control completes, the Transmission Company will send, as soon as practicable after the demand control period finishes, a System Warning Message to the Balancing Mechanism Reporting Agent (BMRA), stating the time that demand control finished (the end of the demand control period);

4. The BMRA will publish the System Warning within five minutes of receipt (current service levels) on the 'System Warnings and other Messages' screen;

5. The Transmission Company will also provide a message to BSCCo, as soon as is reasonably practicable following the end of the demand control, informing BSCCo of the demand control period, and providing the start and end time of the demand control;

6. The Transmission Company will provide a message to BSCCo, as soon as is reasonably practicable following the end of the demand control (once the Transmission Company has been notified by the LDSO of the volume delivered, in accordance with the Grid Code OC6.5.9), informing BSCCo of the volume of demand control deemed to have been delivered for each Settlement Period in the demand control period (the 'deemed demand control volume'), and providing the start and end time of the demand control;

7. The BMRA will calculate the Energy Imbalance Prices **by the current method** at the end of the Settlement Period (as normal) and will report the Indicative Net Imbalance Volume (INIV) and Indicative Energy Imbalance Prices (ISBP and ISSP).

   For the avoidance of doubt, where the Settlement Period falls within a demand control period, and where the INIV is positive, ISBP will be the main price, ***but will have been derived via the current average methodology and will not be marginal****.*

8. For the relevant Settlement Periods, an indicative marginal price be derived and calculated as soon as practicably possible following the Settlement Period, (preferably to the same timetable as BMRA publication of the Indicative Energy Imbalance Prices). BSCCo will include the deemed demand control volume in the Offer stack for the purposes of NIV Tagging.

   The PSMG have stressed the importance of real time prices at this time of system stress and ELEXON are currently exploring the feasibility of this approach;

9. Outside of real time, in preparation for the Settlement Runs, BSCCo will determine what the actual (marginal) System Buy Price would have been for the Settlement Period(s) comprising the demand control period. BSCCo will include the deemed demand control volume in the Offer stack for the purposes of NIV Tagging;

   It should be noted that this requires a complete set of the data required to calculate the Energy Imbalance Prices (BSAD, Bid – Offer Acceptances), which is not usually available to BSCCo until after the Interim Information Settlement Run;

10. Outside of real time, in preparation for the Settlement Runs, BSCCo will determine what Offers were accepted in the Settlement Periods comprising the demand control period and will instruct the BSC Central Service Agent to set the Offer price of these Offers to the marginal System Buy Price derived at (9).

11. BSCCo will amend the System Buy Price to be used in the Settlement Run to the correct price derived at (9) above.

ELEXON are exploring the feasibility of being able to feed the Energy Imbalance Price derived at (9) into the Interim Information Settlement Run, such that there is early sight of the potential Imbalance prices and associated trading charge liabilities.

Furthermore, the Energy Indebtedness calculation uses data from the Interim Information Settlement Run (not the Initial Settlement Run) to derive the Energy Indebtedness for BSC Parties. If the correct Energy Imbalance Price is not used in the Interim Information Settlement Run (i.e. the average SBP, calculated under the current methodology is used), and the discrepancy between the 'correct' marginal SBP and the 'incorrect' average SBP is large (with the marginal much higher), then there is a risk that the Energy Indebtedness will be vastly understated for Parties that were short. This may potentially increase risk to other Parties from any subsequent default.

However, it may not be possible to get the 'correct' SBP into the Interim Information Settlement Run, and in this case, ELEXON will need to explore the impact on the Energy Indebtedness calculation, and potentially derive a workaround for that aspect.

12. For each Settlement Run for a Settlement Day on which a demand control period fell, BSCCo will determine what the actual (marginal) System Buy Price would have been for the Settlement Period(s) comprising the demand control period, using all available data at the time of the Settlement Run;

13. BSCCo will determine what Offers were accepted in the Settlement Periods comprising the demand control period and will instruct the BSC Central Service Agent to set the Offer price of these Offers to the marginal System Buy Price derived at (12); and

14. BSCCo will amend the System Buy Price to be used in the Settlement Run to the correct price derived at (10) above.

ELEXON are currently exploring the most appropriate, robust, efficient and cost effective way of meeting the requirements set out above. Furthermore, ELEXON will highlight to BSC Parties any potential impacts.