

# ASSESSMENT CONSULTATION for Modification Proposal P215 'Revised Credit Cover Methodology for Generating BM Units'

Prepared by: **P215 Modification Group**

**For attention of:** BSC Parties and other interested parties  
**Responses due:** **17:00** on Thursday 15 November 2007  
(to: [modification.consultations@elexon.co.uk](mailto:modification.consultations@elexon.co.uk))

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This document has been distributed in accordance with Section F2.1.10 of the Balancing and Settlement Code.<sup>1</sup>

**Proposed Modification P215** seeks to amend the Balancing and Settlement Code ('the Code') to allow 'generating BM Units' to have their initial Credit Cover calculated using Final Physical Notification (FPN).

**The Group has developed four potential Alternative Modifications for P215** which seek to allow 'generating BM Units' to have their initial Credit Cover calculated using Final Physical Notification (FPN):

- a) As adjusted by Bid-Offer Acceptances (BOAs) after two hours from Gate Closure; or
- b) As adjusted by BOAs and Maximum Export Limit (MEL) after two hours from Gate Closure; or
- c) For the first two Working Days following Gate Closure, then using Metered Volumes from a Central Data Collection Agent run for CVA registered BM Units (but for 'generating BM Units' registered in SVA FPN is used only); or
- d) For the first two Working Days following Gate Closure, then using Settlement Data (Volumes and prices) from a Settlement Aggregation Agent run for CVA registered BM Units (but for 'generating BM Units' registered in SVA FPN is used only).

## PURPOSE OF CONSULTATION

This consultation seeks respondents' views regarding P215 and, in particular:

- Whether the Proposed Modification would better facilitate the achievement of the Applicable BSC Objectives<sup>2</sup> when compared to the current Code baseline;
- Whether the options for an Alternative Modification would better facilitate the achievement of the Applicable BSC Objectives when compared to the Proposed Modification;
- Which Alternative option best facilitates the Applicable BSC Objectives when compared to the Proposed;
- Whether Parties who would qualify for the P215 solution but do not currently submit FPNs would seek to use the P215 arrangements;
- Whether Parties believe the P215 solution adequately secures Parties in the event of a plant trip;
- How Parties believe that the issue of Consumption Status BM Units within Production Status Trading

<sup>1</sup> The current version of the Code can be found at <http://www.elexon.co.uk/bscrelateddocs/BSC/default.aspx>.

<sup>2</sup> A copy of the Applicable BSC Objectives is provided in Appendix 1.

Units should be resolved;

- Whether there are any alternative solutions that the Modification Group has not identified and that should be considered; and
- Whether there are any substantive issues not considered by the Modification Group which should be brought to the Group's attention for inclusion in its Assessment of P215.

**You are invited to provide a response to the questions contained in the attached pro-forma.**

Please send responses, entitled 'P215 Assessment Procedure Consultation', by **17:00** on **Thursday 15 November 2007** to the following e-mail address: [modification.consultations@elexon.co.uk](mailto:modification.consultations@elexon.co.uk).

Any queries on the content of the consultation pro-forma should be addressed to Dean Riddell (020 7380 4366), e-mail address [dean.riddell@elexon.co.uk](mailto:dean.riddell@elexon.co.uk).

This consultation document is also being simultaneously issued for impact assessment by BSCCo and the Transmission Company.

## CONTENTS TABLE

<b>Summary of Impacted Parties and Documents .....</b>	<b>4</b>
<b>1 Executive Summary .....</b>	<b>5</b>
<b>2 Description of Modification.....</b>	<b>6</b>
2.1 Proposed Modification.....	8
2.2 Alternative Modification.....	11
<b>3 Areas Raised by the Terms of Reference .....</b>	<b>15</b>
3.1 Demonstration of the defect in the existing Code requirements as a result of the current Credit Cover arrangements .....	15
3.2 Impact of P215 on the risk of over- and under-collateralisation by Parties due to the BSC Credit Cover arrangements .....	16
3.3 Potential discrimination between generating and consuming BM Units .....	16
3.4 Any relevant precedents from P140 and interconnector use of FPN in CEI calculation .....	16
3.5 Any consequential impact of using FPN instead of CALF and GC/DC on the BSC, Grid Code or other codes and associated processes .....	16
3.6 Potential mandatory FPN submission by generating BM Units .....	17
3.7 Default P215 provisions if FPNs are not submitted.....	18
3.8 Any implications of using FPN data for a purpose other than it was originally intended ....	18
3.9 Impact on National Grid of additional FPN data .....	19
3.10 Impact of data requirements on Parties and BSC Agents.....	19
3.11 Impact on Central Systems .....	20
3.12 The accuracy of FPNs compared with actual Metered Volumes .....	20
3.13 Implementation Approach .....	21
<b>4 Assessment of Modification Against Applicable BSC Objectives .....</b>	<b>21</b>
4.1 Proposed Modification.....	21
4.2 Alternative Modification.....	22
<b>5 Terms Used in this Document.....</b>	<b>23</b>
<b>6 Document Control.....</b>	<b>24</b>
6.1 Authorities .....	24
<b>Appendix 1: Applicable BSC Objectives .....</b>	<b>25</b>
<b>Appendix 2: Process Followed .....</b>	<b>25</b>
<b>Appendix 3: Results of Initial Assessment .....</b>	<b>28</b>
<b>Appendix 4: P215 Analysis.....</b>	<b>31</b>
<b>Appendix 5: FPN 'Gaming' Analysis .....</b>	<b>31</b>

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## SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

As far as the Modification Group has been able to assess, the following parties/documents would be impacted by P215.

Please note that this table represents a summary of the full impact assessment results in Appendix 3.

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

## 1 EXECUTIVE SUMMARY

The key conclusions of the P215 Modification Group ('the Group') to date are outlined below.

The Group:

- **AGREED** an initial majority view that the Proposed Modification would better facilitate the achievement of Applicable BSC Objective (d) by simplifying and increasing the accuracy the Credit Cover arrangements;
- **AGREED** an initial majority view that the Proposed Modification would not better facilitate the achievement of Applicable BSC Objective (c) because the accuracy of all BM Units would not be equally increased and non-inclusion of BOA activity would lead to under-securitisation.
- **DEVELOPED** a solution for the Proposed Modification whereby FPNs are used in the calculation of CEI for qualifying generating BM Units instead of CALF and GC values;
- **AGREED** that an Alternative Modification should be developed in order to increase the accuracy of the Credit Cover arrangements further than the Proposed Modification;
- **AGREED** an initial view that the Alternative Modification options developed by the Group would better facilitate the achievement of Applicable BSC Objective (d) by increasing the accuracy of the estimation of BM Unit Metered Volumes for use in the Credit Cover arrangements;
- **AGREED** to conduct the BSC Agent and Transmission Company Impact Assessment in conjunction with the industry consultation to establish the implementation costs for the Proposed/Alternative Modification;
- **AGREED** that FPNs and FPNs that are updated with Bid Offer Volume data or subject to replacement by MEL data are more accurate as a method of estimating BM Unit Metered Volumes than the current methodology;
- **AGREED** that the current non-optimisation of the accuracy of the Credit Cover arrangements amounts to a Code defect;
- **AGREED** that increased accuracy of Metered Volume estimation could lead to increased volatility in the Credit Arrangements;
- **AGREED** that P215 does not unduly discriminate between BM Unit types;
- **AGREED** that the provisions proposed by P215 cause an issue around demand BM Units within Production Trading Units;
- **AGREED** that there would not be a substantive impact upon National Grid of potential increased submission of FPNs, and that gaming of FPNs would be of little benefit, and that this and provisions in the Grid Code would therefore render FPN gaming unlikely;
- **AGREED** that the need to procure systems necessary for FPN submission would impact any Parties that do not currently submit FPNs, but that may choose to do so due to P215.

A description of the P215 solution is provided in Section 2. Further information regarding the Group's initial discussions of the areas set out in the P215 Terms of Reference is contained in Section 3.

A summary of the Group's initial views regarding the merits of the Proposed Modification and potential Alternative Modification options can be found in Section 4. A copy of the Group's full Terms of Reference can be found in Appendix 2.



## Summary of P215 Proposed Modification and potential P215 Alternative Modification options

The Group agreed the P215 Proposed Modification as:

Use FPN in the CEI calculation<sup>3</sup> for all BM Units that qualify as a generating BM Unit to which P215 is applicable, as defined in section 2.1, below.

The Group developed four options for a potential P215 Alternative Modification:

1. Use FPNs in the CEI calculation (as in P215 Proposed) initially, updated with BOA volume data when it becomes available (two hours after Gate Closure i.e. Settlement Period +4);
2. Use FPNs in the CEI calculation (as in P215 Proposed) initially, updated with both BOA volume data and Maximum Export Limit (MEL) data (if MEL is lower than FPN) when the BOA and MEL data becomes available (two hours after Gate Closure i.e. Settlement Period +4); or
3. Use FPNs in the CEI calculation (as in P215 Proposed) for all 'generating BM Units'. In conjunction with this, for **qualifying CVA BM Units only**, shorten the CEI period to two Working Days (and extend the AEI period accordingly), by introducing a 'Credit Cover Run' at Settlement Day+2 to extract the Metered Volume data from the Central Data Collection Agent (CDCA). Other qualifying BM Units would continue to use FPN over a five Working Day CEI period.
4. Use FPNs in the CEI calculation (as in P215 Proposed) for all 'generating BM Units'. In conjunction with this, for **qualifying CVA BM Units only**, shorten the CEI period to two Working Days (and extend the AEI period accordingly), by introducing a 'Credit Cover Run' at Settlement Day+2 to extract actual imbalance cash flow data (rather than just Metered Volume data) from the Settlements Administration Agent (SAA). Other qualifying BM Units would continue to use FPN over a five Working Day CEI period.

These options are each described in greater detail in section 2.2, below.

The table below (figure 3) summarises the different aspects of the Proposed Modification and Alternative options that are present in each of the different solutions.

Figure 2: Summary of aspects of the P215 solutions

Solution Aspect	P215 Proposed	Alternative Option 1	Alternative Option 2	Alternative Option 3	Alternative Option 4
Applies to qualifying generating BM Units only	✓	✓	✓	✓	✓
FPN replaces (CALF*GC) in CEI calculation	✓	✓	✓	✓	✓
FPNs adjusted by BOA volume data		✓	✓		
MEL replaces FPN in CEI calculation if lower			✓		
CEI period of qualifying CVA BM Units decreased to 2WD				✓	✓
'Credit Cover Run' uses CDCA Metered Volume data				✓	
'Credit Cover Run' uses SAA MV and cash flow data					✓

<sup>3</sup> In place of BMCAEC multiplied by SPD, where BMCAEC is CALF x GC.

## 2.1 Proposed Modification

As agreed in the Definition Procedure, the provisions of the P215 Modification Proposal would apply on the basis of the following definition:

### **Definition of a generating BM Unit to which P215 is applicable:**

*A BM Unit shall be considered as a generating BM Unit to which the provisions of P215 shall apply if it is a BM Unit which is obliged to submit Physical Notifications due either to obligations placed on it under the Grid Code or because it has indicated its participation in the Balancing Mechanism, and which is not an Interconnector BM Unit, and to which at least one of the following criteria applies:*

- *Its Production/Consumption Status flag is Production; or*
- *It is an Exempt Export BM Unit; or*
- *It has been assigned such generating BM Unit status by the BSC Panel (e.g. following application to the Panel for such status on the basis of evidence of operation as a delivering BM Unit).*

The Group intended that this definition would capture BM Units whose FPN flag is set to 'Yes', either because they are required to have it set to 'Yes' due to obligations placed upon them by the Grid Code or because they have elected for it to be set to 'Yes'. This is reflected in the wording of the first paragraph of the definition, which was used because the Group considered that it would be inappropriate to refer directly to the FPN flag as it is a system characteristic and not a BSC term.

The Group had acknowledged that the wording of the above definition might be revised to more effectively reflect the intentions behind it if this appeared prudent, but that the underlying intent would remain. In particular the Group highlighted that FPN submission for the purposes of P215, and the obligations around this process, were not determined during Definition, therefore this aspect may be refined in Assessment.

Details of the considerations of the Group in the Definition Procedure can be found in the P215 Definition Report ([P215 Definition Report](#), Panel 131/06)).

### **2.1.1 Use of FPN to calculate CEI, in place of BMCAEC**

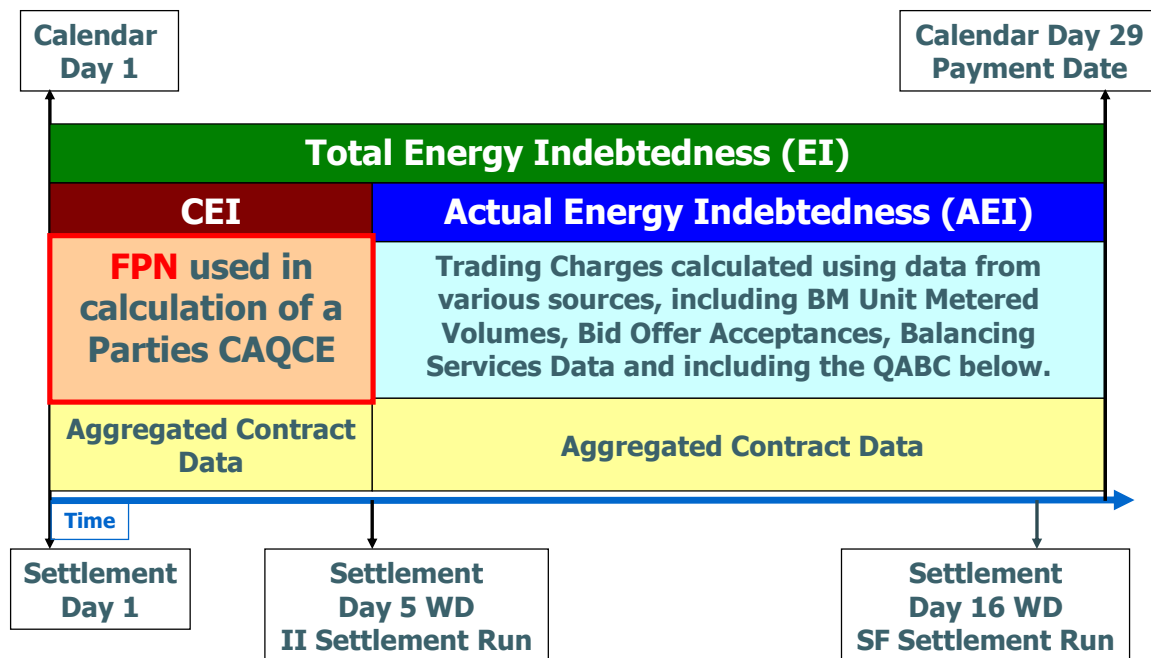
The P215 Proposed Solution is that FPNs are used in the calculation of CEI for generating BM Units in the Credit Arrangements, in place of the BM Unit Credit Assessment Export Capability (BMCAEC). BMCAEC is the product of CALF and GC, and is used in the calculation of CEI for Production BM Units that are not Interconnector BM Units. The P215 IWA provides more detail on this ([P215 IWA](#), Panel 130/06).

The Group agreed a principle that the Credit Cover arrangements are intended to secure against Parties' estimated, deemed imbalance positions, which may include Bid/Offer activity via BOAs. The Group also considered the principle that the purpose of CEI was to provide a suitable proxy estimation for Metered Volumes for the first five Working Days of the credit period. The Group considered that the current methodology for CEI calculation takes into account the effect of BOA activity and outages on a BM Units expected Metered Volume, through examination of historical data for the BM Unit from previous corresponding BSC Seasons. This does not necessarily reflect the BM Unit's operation in any Settlement Period of the current Season, which would not currently be reflected until the next relevant Season.

The Group agreed that the use of FPNs in the calculation of CEI, without the addition of any other new information to the calculation, or any other adjustment to the Credit Cover arrangements, was the intent of the P215 Modification Proposal. The Group was satisfied that FPNs are reasonably accurate as a proxy for the estimation of BM Unit Metered Volumes, and are sufficiently accurate for the purposes of the Credit Arrangements.

Figure 3 illustrates how the arrangements for the calculation of Parties' Energy Indebtedness would be affected by the implementation of the provisions of P215 Proposed Modification, in comparison with the current arrangements as shown previously in figure 1, above.

Figure 3: P215 proposed Energy Indebtedness arrangements



The Group believed that in principle BOA data should be incorporated into the CEI calculation, and considered options for a P215 Alternative Modification that would use FPN adjusted by BOA data. However, the Group considered that BOA data should not form part of the P215 Proposed Modification solution because it was not the intent of the P215 Modification Proposal and because inclusion of BOA data would increase the cost of implementation. The impact of including BOA data would be to materially increase the system changes required and to introduce an alteration to the CEI timetable, and the Group considered it was not appropriate that these impacts should be considered as part of P215 Proposed Modification.

**2.1.2 Default of FPN data**

The Group examined the rules around FPN default that are already in place for the processes of submission of FPNs to National Grid and the use of FPNs in the calculation of CEI for Interconnector BM Units. The Group agreed that the current default rules are sufficiently robust to be used for FPNs in the P215 provisions as the FPN information would continue to be received from National Grid.

Therefore, if no FPN is received for a BM Unit in relation to a particular Settlement Period then the FPN value submitted for the previous Settlement Period would be used in CEI calculation. If no FPN has previously been submitted for the BM Unit, then the FPN will default to zero.

**2.1.3 Reporting in the ECVAA I014 Notification Report**

The ECVAA I014 Notification Report shows 'Credit Assessment Credited Energy Volume by BMU Type'. Credit Assessment Credited Energy Volume (CAQCE) is calculated using BMCAEC, BMCAIC or FPN for Production BM Units, Consumption BM Units and Interconnector BM Units respectively, and is reported accordingly. CAQCE reporting is currently split between 'Interconnector Credit Assessment Credited Energy Volume (MWh)' and 'Non Interconnector Credit Assessment Credited Energy Volume (MWh)'.

The minimum change required to the report would be to change the CAQCE split to one between 'Credit Cover calculated using FPNs' and 'non-FPN Credit Cover' (i.e. the Interconnector category would be expanded to include P215 generators, rather than adding a third category for non-Interconnector FPN Credit Cover).

Greater change may be required to the report under some of the options for P215 Alternative Modifications; this is discussed in the relevant sections of this document, within section 2.2, which outlines these options.

#### **2.1.4 Approach to demand BM Units within Production (P) status Trading Units<sup>4</sup>**

The Group had noted that under the current Credit Cover arrangements, the credit liability of demand BM Units that form part of Production Trading Units is netted off against the exporting BM Units via the CALF values. All BM Units in a Production Trading Unit are assigned P status through the Trading Unit Methodology and the CEI is calculated using the GC; any demand BM Units within the Trading Unit will have its C status switched to P status. However, the BM Units activity will not be accurately reflected if the GC values of such demand BM Units are used; therefore netting their credit liability against the load factor of the Production BM Units in the same Trading Unit applies their demand into the Trading Unit net production estimation and hence the Party's CEI.

It should be noted that demand BM Units within P status Trading Units often tend to have a relatively small demand, as they may represent station demand. The Group considered that the netting off of this demand was of benefit to Parties, because it reduces to some degree the export of the Trading Unit, and thus reduces the amount of EI that the Party must secure by lodging Credit Cover. The Group therefore agreed that the provisions of P215 should retain this benefit, in order to ensure that a detriment is not caused to Parties and to the accuracy of the Credit Cover arrangements.

The Group considered several approaches to resolve this issue, and decided upon three options:

- A. Mandatory submission of FPNs by demand BM Units within P status Trading Units: if the BM Units were required to submit FPNs to National Grid then they would be included into the provisions of P215 Proposed. However, there could be a significant impact on Parties due to the system changes needed to enable FPN submission demand forecasting, and significant change to the appropriate industry Codes (including the Grid Code) would be required. Due to the impact on Parties and the significant changes that would be required to industry Codes, this option was not favoured by the Group.
- B. Optional submission of FPNs by demand BM Units within P status Trading Units: this would require the least change to Party and ECVAA systems of the three options. Parties could decide whether the benefit of having the BM Units included in the Credit Cover arrangements was sufficient to justify the impact associated with submitting FPNs for them. However, if Parties chose not to submit FPNs for these BM Units their demand would not be taken into account in the CEI calculation, even if they defaulted to calculation under the existing rules, because their GC value is zero.
- C. ECVAA system changes so that demand BM Units within P status Trading Units are identified within the system and their CEI is calculated using CALF and DC values. This would involve the least impact on Parties by allowing the BM Units to be included in CEI using DC and CALF values calculated according to the existing methodology. However, there would be a significant impact on the ECVAA system because a system flag would need to be introduced into the ECVAA system in order to identify the BM Units that would have their CEI calculated in this way, and it is anticipated that there would be additional impact due to changes required to enable the processing and reporting for the CEI of these BM Units.

The Group believed that these options each had both benefits and issues associated with them, and determined that they should all be included in the P215 Consultation in order to gauge the preference of the industry in this area.

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<sup>4</sup> A Trading Unit is normally a combination of several BM Units whose Production and Consumption accounts are captured under a single entity, that being the Trading Unit. Trading units are established in accordance with Section K-4 of the Code.

### **2.1.5 Application process for generating BM Unit status**

The Group initially determined that the assignment of generating BM Unit status by the BSC Panel should be determined by application to, and approval by, the BSC Panel (or a Panel Committee delegated responsibility in this area by the Panel). This process would only be for those Parties who do not qualify under the first two criteria described in 2.1.

The Group agreed that a formal procedure should be introduced in a suitable BSC Procedure (BSCP). The Group considered that BSCP15 'BM Unit Registration' should contain the application process.

The Group agreed that the criteria for status as a generating BM Unit should be confirmation by Metered Volume data that the BM Unit is a net exporter over a qualifying period. The qualification period would be the six months prior to the application. The Group noted that Metered Volume data would not be available for new BM Units; therefore it was agreed that provisional status as a generating BM Unit could be assigned on the basis of the BM Units GC/DC values. Such provisional generating BM Unit status would be subject to a one-off review, after six months, of the BM Unit's Metered Volume data over the preceding six months, in order to confirm net export and ratify status as a generating BM Unit.

### **2.1.6 Review of generating BM Unit status**

The Group agreed that ongoing monitoring of generating BM Unit status is necessary. Consideration was given to self-regulation by Parties by introducing Code requirements putting the onus on Parties to declare any change that would affect its generating BM Unit status. However, it was noted that monitoring similar to that currently done for GC and DC values could be performed relatively easily.

The Group therefore agreed that review of BM Units' status as a generating BM Unit should be carried out in line with current GC/DC reviews. All Settlement Periods in an annual review period should be examined to determine whether the BM Unit operated as a net exporter of power over that period. For avoidance of doubt this review of generating BM Unit status would apply only to those BM Units that do not have P status.

## **2.2 Alternative Modification**

### **Option 1: Use FPN to calculate CEI initially and update with BOA data**

Under this option, FPNs would be used in the calculation of CEI as in the P215 Proposed Modification. However, the value of CEI for each Settlement Period would then be updated with BOA data when it becomes available two hours after Gate Closure (i.e. and therefore two hours after the initial calculation of CEI using FPN).

The Group had agreed that in principle the CEI should incorporate information on BM Units' bid/offer activity. The inclusion of BOA data in the CEI calculation would allow this, and thereby increase the accuracy of CEI as an estimated proxy for BM Units' Metered Volumes.

This would be accomplished by introducing an Initial Credit Cover Percentage (ICCP) for qualifying BM Units, calculated using FPN in the CEI of the relevant Settlement Period. The full Credit Cover Percentage (CCP) would then be calculated including BOA data, and would replace the ICCP value relating to the Settlement Period. BOA data becomes available around 1 hour 35 minutes after Gate Closure, and therefore the CCP would be calculated two hours after Gate Closure of the Settlement Period.

BOA volumes would be included in the CEI element of the CCP calculation by using the quantity Period Expected Metered Volume ( $QME_{ij}$ ), which is FPN adjusted with BOA data, in place of the FPN used previously in the CEI calculation. The Group noted that using QME in this way meant that BOA volume data would be used only to adjust the energy position of BM Units to increase the accuracy of the estimation of energy volumes; actual pricing data associated with accepted Bids and Offers would not be used. The Group considered that this caused the CEI calculation as a proxy estimation of Metered Volumes to tend toward underestimation, because the value of accepted bids would not be taken into account.

The Group discussed the Credit Default arrangements but concluded that P215 should not seek to impact these rules. The Group considered that Parties should ensure that they have lodged sufficient Credit Cover to avoid falling into Credit Default, irrespective of the calculation methodology used. The same Credit Default rules would therefore apply regardless of how CEI has been calculated.

If the BOA data for a Settlement Period is not available when the CCP is to be calculated, e.g. due to system outages, then the CCP would default to the ICCP value calculated for that Settlement Period. Default of ICCP would be as described in the P215 Proposed Solution above, i.e. based on the established rules for FPN default.

The Group considered the impact of option 1 on reporting in the ECVAA I014 Notification Report, and agreed that inclusion of BOA data via ICCP and CCP may necessitate more change to the report than P215 Proposed Modification. The Group considered that it would be unnecessary to report the ICCP values separately (i.e. as these are valid for only two hours before being updated to the CCP value when the data is available). The Group anticipated that as the report is produced at 3am the following day it would be possible for the I014 report to include all CCP data from the relevant Settlement Day, including CCP data whose production delayed by two hours due to the incorporation of BOA data, without disruption to the current timescales.

However, unlike the P215 Proposed Modification, the methodology proposed by P215 Modification Alternative option 1 effectively introduces another means of CEI calculation that is distinct from both the use of FPN by Interconnector BM Units and the use of BMCAEC/BMCAIC by other BM Units, because it utilises BOA data in addition to FPN data. Therefore a new category on the I014 report may be required in order to report the CAQCE of 'generating BM Units' (i.e. that use FPNs adjusted by BOA data in calculations). The BSC Agent IA will assess the impact of modifying the ECVAA I014 report in this manner.

### **Option 2: Use FPN to calculate CEI initially and update with BOA and MEL data**

This option elaborates on the first P215 Alternative option, described above. FPNs would be used in the calculation of CEI as in P215 Proposed. However, the value of CEI for each Settlement Period would subsequently be updated with both BOA and MEL data two hours after Gate Closure (i.e. and therefore two hours after the initial calculation of CEI using FPN).

BOA volumes would be included in the CEI element of the CCP calculation by using the quantity Period Expected Metered Volume ( $QME_{ij}$ ), which is FPN adjusted with BOA data, in place of the FPN used previously in the CEI calculation. The Group noted that using QME in this way meant that BOA volume data would be used only to adjust the energy position of BM Units to increase the accuracy of the estimation of energy volumes; actual pricing data associated with accepted Bids and Offers would not be used. The Group considered that this caused the CEI calculation as a proxy estimation of Metered Volumes to tend toward underestimation, because the value of accepted bids would not be taken into account.

The Group had noted that in the case of generator trip causing a BM Unit outage, FPN submissions would not necessarily lead to incorporation of the outage into the CEI calculation as promptly as it should be in order to optimise the accuracy of CEI as an estimated proxy for BM Units' Metered Volumes. It was acknowledged that in the event of a generator trip, resubmission of FPNs to ensure they accurately reflect the actual operation of the BM Unit may not be a priority. However, the Grid Code requires that BM participants must when necessary, and as soon as reasonably practicable, re-declare their MEL to more accurately reflect their output capability. The Group therefore considered that MEL data would mitigate the risk of generator trips affecting CEI accuracy by ensuring their impact on BM Units' output is incorporated into the calculation of CEI as soon as possible.

MEL is initially available at Gate Closure, like FPN, but this is unadjusted MEL and is no more accurate than FPN submissions. With regard to a given Settlement Period, the latest value of MEL submitted in relation to that Settlement Period by two hours after Gate Closure would be compared with the FPN value used to calculate the CEI for the ICCP for that Settlement Period. If the MEL is lower than the FPN value it would be

used in the calculation of the CCP for the Settlement Period; if not then the ICCP value would be calculated using the QME relating to the Settlement Period in the CEI element of the calculation.

As in option 1, in the case that data is not available the CCP would default to the ICCP value calculated for the Settlement Period. Application and removal of flags for potential Credit Default would also use the same methodology as in P215 Alternative Modification option 1.

The Group considered the impact of option 2 on reporting in the ECVAA I014 Notification Report, and agreed inclusion of BOA and MEL data via ICCP and CCP may necessitate more change to the report than P215 Proposed Modification though it would be unnecessary to report ICCP values separately. The Group anticipated that as with option 1 the production of the report at 3am the following day would enable the ECVAA I014 report to include all CCP data from the relevant Settlement Day without disruption to the current timescales. However, similarly to option 1, the methodology proposed by option 2 also introduces another means of CEI calculation distinct from both FPN use by Interconnector BM Units and BMCAEC/BMCAIC use by other BM Units, because it utilises BOA and MEL data in addition to FPN data. Therefore a new ECVAA I014 report category may be required to report the CAQCE of 'generating BM Units'. As noted previously, the BSC Agent IA will assess the impact of modifying the ECVAA I014 report in this manner.

### **Option 3: Use FPN to calculate CEI, and shorten the CEI period for qualifying CVA BM Units by using Metered Volume data**

The third P215 Alternative Modification option is to use FPNs in the CEI calculation (as in P215 Proposed, i.e. without updating with any additional information) for all 'qualifying' BM Units; in conjunction with this, for **qualifying CVA BM Units only**, shorten the CEI period to two Working Days (and extend the AEI period accordingly). This would be done by introducing a 'Credit Cover Run' at Settlement day+2 using Metered Volume data from CDCA. Other qualifying BM Units would continue to use FPN over a five working day CEI period. The II Run would continue to take place for all BM Units five Working Days after the Settlement Period.

The majority of the Metered Volume data required for such a Credit Cover Run is available by two days after a given Settlement Period. The CDCA has a target of collecting 98.5% of raw CVA Metered Volume data by Settlement Day+2, and typically has around 99% of this data by this time. This data is direct from meter channels and is unvalidated at this point, but the Group believed that even in this form the Metered Volume data available would be significantly more accurate than a value of CEI calculated using either the current methodology or the methodology proposed by the P215 Proposed Modification. However, the Group considered that the methodology of option 3 would be only marginally more accurate than the methodology proposed by P215 Alternative Modification options 1 and 2. The Group also noted that unlike the II Run, the results of a Credit Cover Run would only be used for Credit Cover purposes.

If no Metered Volume data is available for a BM Unit (either from the Main or Check meter) then the value used in the calculation of CCP would default to the CEI value calculated for the Settlement Period using FPN data.

Large generating BM Units are registered in CVA and would therefore be subject to the earlier use of Metered Volume data in the Credit Cover arrangements. The Group was comfortable that this would render the use of either BOA or MEL data in the CEI period unnecessary, as the shorter duration of the CEI period would sufficiently mitigate any detrimental impact on accuracy of not including Bid/Offer Acceptances and not incorporating generator trips as soon as practical.

'P' status generating BM Units and CVA-registered Exempt Export BM Units would be subject to the shorter CEI period and earlier use of Metered Volume data proposed by option 3. However, SVA-registered Exempt Export BM Units and BM Units assigned generating status after application would not be subject to the shorter CEI period and earlier use of Metered Volume data proposed by option 3.

Under option 3 any BM Unit captured by the P215 definition of a generating BM Unit that is not CVA-registered would use FPN data in the calculation of its CEI, over a CEI period that would remain five Working Days. The Group considered that the operation of SVA-registered Exempt Export BM Units and other potential qualifying BM Units identified thus far does not involve a significant amount of BOA activity, and that the effect of an Exempt Export generator trip would not be material. The Group only identified one type of BM Unit type that may qualify through application and that is a BM Unit acting as a consolidator for export sites registered in SVA. It was noted that though consolidator BM Units may produce significant Export amounts, they are not subject to the same trip risk as BM Units of a comparable scale that are made up of one or several large generators. While a single exemptible generator that contributes its Export to a consolidator may trip, it is very unlikely that a significant number of all the contributing exemptible generators would trip at the same time.

The Group was therefore comfortable that CEI for these BM Units could satisfactorily be calculated using FPN submissions not augmented with any BOA or MEL data, without causing any material detrimental impact upon the accuracy of Credit Cover.

Option 3 would impact the ECVAA I014 Notification Report in a similar way to the P215 Proposed Modification because CAQCE would be calculated using FPNs for BM Units that qualify as generating BM Units. However, the CEI period for generating BM Units registered in CVA would be reduced from five Working Days to two Working Days. Any impact of this reduction on the ECVAA I014 report would be assessed as part of the BSC Agent IA.

#### **Option 4: Use FPN to calculate CEI, and shorten the CEI period for qualifying CVA BM Units by using Metered Volume and pricing data**

The fourth P215 Alternative Modification option is to use FPNs in the CEI calculation (as in P215 Proposed, i.e. without updating with any additional information) for all 'qualifying' BM Units; in conjunction with this, for **qualifying CVA BM Units only**, shorten the CEI period to two Working Days (and extend the AEI period accordingly). This would be done by introducing a 'Credit Cover Run' at Settlement day+2 using imbalance cash flow data from SAA incorporating indicative cashout prices from BMRS. Though these prices may be subject to change prior to their use in actual Settlement runs, in practice they rarely change significantly. Other qualifying BM Units would continue to use FPN over a five working day CEI period. The II Run would continue to take place for all BM Units five Working Days after the Settlement Period.

As for option 3, the Credit Cover Run for option 4 would use the 99% of unvalidated Metered Volume data typically available by Settlement Day+2. This Metered Volume data from the CDCA would then be loaded into the SAA. In order to do this, SVA data would need to be loaded into the SAA as well; this would be done by creating a 'dummy' Supplier Volume Allocation Agent (SVAA) file. Loading data into the SAA in this way would enable actual pricing data to be used in conjunction with actual Metered Volume data, leading to a significant increase in accuracy compared with option 3.

In order to load such a dummy SVAA file into SAA, a value for SVA Metered Volumes would need to be included in the SVAA file. The Group's proposed approach to this is to use the current proxy for C status BM Units, (DC x CALF). Pricing and Metered Volume data would then be calculated by the SAA for all BM Units (both CVA and SVA, generation and demand), but only the results for CVA-registered qualifying generating BM units would be used in the Credit Cover arrangements. This would comply with the scope of the P215 Modification Proposal, which is limited to generating BM Units only, and may not affect the CEI or Credit Cover calculation of any other types of BM Unit.

This Metered Volume Data that would be used under option 4 would be direct from meter channels and unvalidated at the time it would be input into the Credit Cover Run. The Group believed that, even with these inherent limitations, when this available data was loaded into the SAA the pricing data produced would be significantly more accurate, in conjunction with the Metered Volume data, than any of the other proxy estimations for BM Unit Metered Volumes considered under P215. The Group agreed that the results of the methodology proposed by option 4 would be significantly more accurate than a value of CEI calculated using

either the current methodology, the methodology of the P215 Proposed Modification or the P215 Alternative Modification options 1 and 2, and significantly more accurate than the results of the methodology of P215 Alternative Modification option 3. The Group considered that the greater accuracy that they anticipated for the option 4 methodology was self evident, because unlike the other methodologies option 4 would use both actual Metered Volumes and calculated pricing data. The Group also noted that unlike the II Run, the results of a Credit Cover Run would only be used for Credit Cover purposes.

The Group noted that the CAP value would be applied to the SAA output data in order to convert cash flow values into Energy Indebtedness. The Group was initially concerned that multiplying the SAA data by CAP would erode the benefit of calculating actual pricing data. However, the Group further considered that Energy Indebtedness amounts are converted to Credit Cover quantities using CAP. The Group therefore concluded that though cash flows would be converted to MWh quantities of EI using CAP, they would also be converted back to cash values using the same CAP value for the purposes of Credit Cover. The Group agreed that the use of CAP in this way would have no detrimental effect on accuracy, and the value of the SAA calculated cash flows would be perfectly reflected in consequent Credit Cover requirements.

As for P215 Alternative Modification option 3, if no Metered Volume data is available for a BM Unit (either from the Main or Check meter) then the value used in the calculation of CCP would default to the CEI value calculated for the Settlement Period using FPN data. The Group considered that the earlier use of both Metered Volume and pricing data in the Credit Cover arrangements would render the use of either BOA or MEL data in the CEI period unnecessary and would additionally increase the accuracy of the arrangements compared with option 3.

Again, as with option 3, under option 4 'P' status generating BM Units and CVA-registered Exempt Export BM Units would have the shorter CEI period, but other qualifying BM Units that are registered in SVA would not. SVA-registered Exempt Export BM Units and SVA-registered BM Units that qualify for generating BM Unit status by application would retain a CEI period of five Working Days, and would have their CEI calculated using FPN data as in the P215 Proposed Modification, i.e. without inclusion of BOA and MEL data. The Group was comfortable with this approach for the same reasons applied for option 3, that the BM Units concerned do not exhibit significant amounts of BOA activity and that either the impact or risk of generator trip associated with them is not material.

As with option 3, option 4 would impact the ECVA 1014 Notification Report in a similar way to the P215 Proposed Modification because CAQCE would be calculated using FPNs for BM Units that qualify as generating BM Units. However, the CEI period for generating BM Units registered in CVA would be reduced from five Working Days to two Working Days. Any impact of this reduction on the ECVA 1014 report would be assessed as part of the BSC Agent IA.

### **3 AREAS RAISED BY THE TERMS OF REFERENCE**

This section outlines the initial conclusions of the Modification Group regarding the areas set out in the P215 Terms of Reference.

#### **3.1 Demonstration of the defect in the existing Code requirements as a result of the current Credit Cover arrangements**

The Group considered that the analysis conducted (see section 3.12) had demonstrated the superior accuracy of FPNs as a proxy estimation of the Metered Volumes of generating BM Units compared with the current methodology of calculating Energy Indebtedness in the CEI period. The Group agreed that this amounted to a defect in the current Credit Cover arrangements as it showed that they do not achieve optimal accuracy.

### **3.2 Impact of P215 on the risk of over- and under-collateralisation by Parties due to the BSC Credit Cover arrangements**

The Group examined the material impact of the provisions proposed by P215 in relation to the risk of over- and under-collateralisation by Parties as a result of the BSC Credit Cover arrangements. Parties may always lodge excessive Credit Cover, i.e. 'over-collateralise' their position, but this area was to cover specifically the effect that the Credit Cover arrangements would have on the risk of Parties lodging too much or too little Credit Cover as a result of inaccurately-calculated CEI.

The Group considered that P215 Proposed Modification would tend to cause Parties to be under-collateralised in comparison with the actual risk they pose to other Parties. This is because the Proposed Modification does not include any adjustment of the FPNs using Bid Acceptance data, leading to an underestimation of BM Units' actual Metered Volumes in their CEI. This contributes to underestimation to a lesser extent in the Parties' overall Energy Indebtedness, leading to the amount of Credit Cover that they are required to lodge being less than the optimal amount required to secure against their actual Energy Indebtedness.

### **3.3 Potential discrimination between generating and consuming BM Units**

The Group considered that P215 did not contain any undue discrimination between generating and consuming BM Units, as the proposed provisions were dependent upon the availability of accurate and timely FPN submissions. While there are some demand BM Units that are able to submit accurate FPNs, the majority of consuming BM Units cannot. The Group considered how any suitable consuming BM Units could be included in the P215 proposed provisions, and could not envisage how they could be incorporated into a clear cut definition. Their inclusion would likely need to be via application which would require a procedure and associated administration. Though P215 has an efficiency benefit due to the reduction in the burden of CALF administration, the need to implement a new application process could erode, if not completely remove, this benefit.

### **3.4 Any relevant precedents from P140 and interconnector use of FPN in CEI calculation**

The Group considered that there were no precedents that were directly relevant to their consideration of the P215 Modification Proposal, as Interconnector BM Units inherently differ from other BM Units in their mode of operation. The Group examined some of the analysis conducted for P140 and conducted similar analysis (see Attachment 1, section 4), and also considered that the FPN default rules implemented under P140 were suitable to be applied to the provisions proposed by P215

### **3.5 Any consequential impact of using FPN instead of CALF and GC/DC on the BSC, Grid Code or other codes and associated processes**

It was noted as part of this area that the impact on BSC Panel processes should be minimised, and where Panel involvement is necessary there should be a guideline process and criteria. It is probable that any Panel involvement would be delegated to the relevant Panel Committee.

The Group discussed the Credit Default arrangements but concluded that P215 should not seek to impact these rules. The Group considered that Parties should ensure that they have lodged sufficient Credit Cover to avoid falling into Credit Default, irrespective of the calculation methodology used. The same Credit Default rules presently used would therefore apply regardless of how CEI has been calculated.

#### **3.5.1 BSC**

Section M of the BSC would be impacted; M1.2.3 concerns calculation of CAQCE for the various types of BM Unit, and would be changed in accordance with P215 Proposed Modification, or in a slightly amended manner in the case of the potential P215 Alternative Modifications. The impact on the Code would vary

depending on the Alternative option that is progressed. The impact on the Code cannot be fully assessed until such time as a P215 Alternative Modification is finalised.

### **3.5.2 Grid Code**

If submission of FPNs by demand BM Units within P status Trading Units were to be mandated, the Grid Code would need to be changed to reflect this obligation. The Group had discussed the possibility of a potential workaround solution whereby Parties could submit FPNs directly to ELEXON, where the FPNs were to be used solely for the purposes of the Credit Cover arrangements, which would eliminate the need for a change to the Grid Code as such FPN submission would be governed by the BSC. However, the Group concluded that such a workaround would not be feasible, as they believed that it would tend to cause Parties to be uncertain regarding the purpose of FPNs and the process and requirements around their submission. FPN submission under the Grid Code also has associated obligations, for instance mandating the accuracy of FPNs, which the Group did not believe should be relinquished.

The Group noted that the modification of the Grid Code to introduce the requirements to mandate submission of FPNs by demand BM Units within P status Trading Units would be a significant and complex change. The Group did not favour this approach.

### **3.5.3 Application Process**

The Group agreed that the assignment of generating BM Unit status by the BSC Panel should be determined by application to, and approval by, the BSC Panel (or a Panel Committee delegated responsibility in this area by the Panel).

The Group discussed whether a formal procedure was required for the process of application, and submission of supporting evidence or a declaration, or whether the process could be adequately covered in a guidance document. It was agreed that a formal procedure should be introduced in a suitable BSCP. The Group considered that BSCP15 'BM Unit Registration' would be an appropriate place for the application process to sit. Details of the proposed application procedure can be found in section 2.1 'Proposed Modification', which contains a section on the application process for generating BM Unit status.

## **3.6 Potential mandatory FPN submission by generating BM Units**

This area was included to specify that consideration should be given as to whether submission of FPNs would be mandated for all generating BM Units, and also whether this would include BM Units with an output less than 50MW. The impact of mandating FPN submission for BM Units with an output less than 50MW should also be considered.

The Group considered that there may be some types of BM Unit to which it would be inappropriate to apply the arrangements proposed by P215. The type of BM Unit that particularly concerned the Group was BM Units that would exhibit intermittent generation, such as wind or wave generation. The Group sought to examine analysis for such BM Units; the only data available was for wind generation BM Units.

However, this data showed that FPNs submitted by both wind generation BM Units with an output below 100MW, and those whose output exceeds 100MW, were more accurate than the current means of estimation used in CEI calculation. The Group therefore agreed that it was not necessary to make a particular exception for intermittent generators, and that there were no other BM Unit types for which an exception should be made.

As detailed in section 2.1, the Group had considered how to resolve the issue of demand BM Units within Production (P) status Trading Units<sup>4</sup>, and considered mandating FPN submission by these BM Units as an option. Under the current Credit Cover arrangements, the demand of BM Units that form part of P status Trading Units are netted off the export of the Trading Unit before the CEI is calculated. This is a necessary step because the Trading Unit's CEI is calculated using GC, and demand BM Units have GC values of zero;

therefore netting their import with the export of Production BM Units in the same Trading Units is the only means currently available to incorporate their demand into a Party's CEI.

Demand BM Units within P status Trading Units have relatively small demand, as they typically represent plant demand. The Group considered that the netting off of this demand was of benefit to Parties, because it reduces to some degree the export of the Trading Unit, and thus reduces the amount of EI that the Party must secure by lodging Credit Cover. The Group therefore agreed that the provisions of P215 should retain this benefit, in order to ensure that a detriment is not caused to Parties and to the accuracy of the Credit Cover arrangements.

The Group agreed several potential approaches to resolve this issue, which they believed each had both associated benefits and issues. The Group determined all the options should be included in the P215 Consultation in order to gauge the preference of the industry in this area. The options are:

1. Mandatory submission of FPNs by demand BM Units within P status Trading Units.
2. Optional submission of FPNs by demand BM Units within P status Trading Units.
3. ECVAA system changes so that demand BM Units within P status Trading Units are identified within the system and their CEI is calculated using CALF and DC values.

Further detail on these options can be found in the relevant section within section 2.1, above.

### **3.7 Default P215 provisions if FPNs are not submitted**

This area was included to ensure that a default position for the P215 provisions is considered for use in the case that an FPN is not submitted. For example, for Interconnector BM Units, in this situation the ECVAA system uses the latest available FPN in the calculations; if no previous FPN exists for the BM Unit the FPN value defaults to zero.

The Group considered the default process for the FPNs submitted by Interconnector BM Units. The FPN default process followed by the ECVAA is documented in the ECVAA URS, functional requirement ECVAA-F010 'Calculate Party Indebtedness', step 1b. The process applies only to Interconnector BM Unit FPNs, and reflects that if an FPN is not received from an Interconnector BM Unit, then the last FPN received from that BM Unit is used; if an FPN has never been received from the BM Unit an FPN of zero is used.

Code Requirements regarding FPNs are found in sections Q3 and T3.2. Requirements reflecting the default FPN process in the ECVAA URS are located in paragraph 3.2 of Code section T 'Settlement and Trading Charges'.

The Group agreed that these requirements would be appropriate to apply to the provisions of P215. The Group noted that the defaulting of FPNs to zero if none were ever submitted would act as a natural incentive (in addition to the obligations of the Grid Code) for Parties to ensure they submit at least an initial FPN, because a continual FPN of zero would lead to the Parties have to lodge excessive Credit Cover (i.e. when compared with the BM Units contracted volume the zero FPN would make the BM Unit appear always short, which would lead to it having to lodge more Credit Cover). The Group considered this would encourage smaller Parties associated with Exempt Export BM Units that had elected to submit FPNs in order to be included in the proposed Credit Cover arrangements to obtain the necessary systems to enable FPN submission.

### **3.8 Any implications of using FPN data for a purpose other than it was originally intended**

The Group considered whether there would be any unintended implications associated with using FPN data in the manner proposed by P215, which means it would be used in a way it was not originally intended and different to its current role as a purely technical parameter. Specifically consideration was given to the impact of using FPN in the Credit Cover calculation in addition to it being used by the System Operator (SO);

for instance would FPN become a more commercial parameter, and what effect, if any, would this have on the SO's ability to balance the System.

The Group discussed review of FPN submission following implementation of the proposed P215 provisions, in order to ensure that accurate FPNs are submitted. The Group agreed by majority that, though ELEXON could perform analysis of FPN compared with Metered Volumes, ultimate responsibility for FPN accuracy would be National Grid's, as mandated by the Grid Code. It should be noted that National Grid has stated that there are currently no obligations on them to monitor FPN submission, and that the current Grid Code provisions specify only that Users should submit FPNs in accordance with Good Industry Practice.

The Group noted that use of the Information Imbalance charge is an option, though it is not used at the moment because FPNs are purely a technical parameter and there is not perceived to be any motivation for Parties to submit inaccurate FPNs.

The Group conducted analysis to examine the feasibility of Parties gaming with their FPN submissions to gain a benefit in relation to the Credit Cover arrangements. The Group agreed that the analysis showed that such FPN gaming would have little benefit and would therefore be unlikely. The analysis can be found in Attachment 2.

### **3.9 Impact on National Grid of additional FPN data**

This area for assessment reflects that there are generating BM Units that currently do not have to submit FPNs, though they can choose to do so (i.e. exempt export BM Units). Therefore if FPN submission is made mandatory, or if it remains optional in these cases but is attractive due to a perceived Credit Cover benefit, more submissions may be made to National Grid. The Group assessed the possible increase in the volume of FPNs received by National Grid, and whether there would be any impact on systems and processes if there was an increase.

The Group examined the number of BM Units that currently do not submit FPNs but that could choose to do so (i.e. that may qualify as Exempt Export BM Units). The Group concluded that at present there was not a significant number of BM Units that could potentially begin to submit FPNs, and noted that in addition these BM Units would have relatively low export volumes. The Group considered that there would be limited impact upon National Grid even if a large proportion of Exempt Export BM Units not submitting FPNs began to submit FPNs in order to have them included in the Credit Cover arrangements.

It was agreed that the FPN data should be received from National Grid, as it is currently and that Parties submitting FPNs should do so through National Grid as this information should be useful to the System Operator. The Group have asked the System Operator to identify any impacts arising from the P215 solution as part of their Impact Assessment.

As noted previously, if submission of FPNs by demand BM Units within P status Trading Units was mandated, the change required to the Grid Code would be significant, and may involve impact on contractual and technical obligations of National Grid.

### **3.10 Impact of data requirements on Parties and BSC Agents**

Impact of data requirements, for instance if the ECVAA needs data (e.g. QM) it does not currently possess to determine a BM Unit's generating status, is there an impact on BSC Agents that would supply the data, e.g. the SAA.

The Group noted that Parties need to have an Electronic Data Transfer (EDT) system in order to submit Physical Notifications to National Grid. Parties not currently submitting FPNs would therefore need to procure such a system in order to do so. A widely used standard commercial EDT package is available, or a basic NG system. This requirement would have an associated cost impact on affected Parties.

The P215 Alternative Modification options would all, to a varying degree, require ECVAAs to receive data it does not currently possess. The detailed requirements around the required data will be assessed as part of the BSC Agent IA.

### **3.11 Impact on Central Systems**

The ECVAAs I014 Notification Report currently gives 'Credit Assessment Credited Energy Volume by BMU Type', which is split between 'Interconnector Credit Assessment Credited Energy Volume (MWh)' and 'Non Interconnector Credit Assessment Credited Energy Volume (MWh)'. The Group considered that under the P215 Proposed Modification this should become split between CAQCE calculated using FPNs and non-FPN CAQCE (i.e. the Interconnector category would be expanded to include P215 generators, rather than adding a third category for non-Interconnector FPN Credit Cover). Greater impact on this report would be associated with each of the P215 Alternative Modification options.

The full impact on Central Systems will vary widely across the P215 Proposed and Alternative Modification options. The extent of the potential impacts of P215 on Central Systems will be assessed in detail as part of the BSC Agent IA.

### **3.12 The accuracy of FPNs compared with actual Metered Volumes**

The Group conducted analysis of the accuracy of FPNs compared with actual Metered Volume data. In addition, the Group carried out similar analysis of the current method of estimating Metered Volume for the purposes of the CEI calculation, i.e. Settlement Period Duration (SPD) multiplied by BMCAEC, and also the quantity Period Expected Metered Volume ( $QME_{ij}$ ) which is FPN adjusted with BOA volume data. This analysis was conducted for examples of a range of different types of BM Units, including: coal, nuclear, pumped storage, gas, and wind powered plant. Details of the analysis, including the graphs produced, can be found in Attachment 1.

The analysis used a rolling calculation over the five Working Days of the CEI period. Graph 1(a) shows how the length in calendar days of the CEI and AEI periods that make up the total 29-day EI period varied over the analysis period of 1 September 2006 to 31 August 2007. As the MWh quantity (SPD x BMCAEC) is a constant value over a Settlement Day and BM Units' values of CALF and GC are constant over each three month BSC Season period, the current proxy estimation for BM Units' Metered Volumes in the CEI period (i.e. SPD x BMCAEC) mirrors the pattern of the number of CEI days, though it shifts up or down over each BSC Season as the assigned value of CALF and declared GC vary. This can be seen in graph 1(b).

Analysis of the coal (graphs 1(c), 1(d)) and gas BM Units (graphs 1(e), 1(f)) showed that their submitted FPNs are significantly more accurate than the current methodology (SPD x BMCAEC), especially when there is an outage of the BM Unit. At times of plant outage the value of (SPD x BMCAEC) continues to reflect normal operation and is therefore completely inaccurate (though the outage would be taken into account in the CALF assigned for the next relevant BSC Season one year later).

Due to the predictable and stable manner of its operation, the current methodology gave a reasonably accurate estimate for the nuclear BM Unit (see graphs 1(g), 1(h)) at times when the plant operated normally at a steady load, though when there was a plant outage this estimation was again completely inaccurate. The submitted FPNs of the nuclear plant provided a more accurate estimation of the BM Unit Metered Volume. The FPNs submitted by the pumped storage BM Unit (see graphs 1(i), 1(j)) were more accurate than the current methodology, though it tended to underestimate the Metered Volume. The Group was concerned that FPNs for pumped storage BM Units would not be sufficiently accurate because these BM Units have a lot of BOA activity in their normal operation, which reduces the effectiveness of FPNs as a means of estimating Metered Volumes.

The Group examined impact of the inclusion of BOA data on the accuracy of estimation, by comparing the accuracy of QME (FPNs adjusted by BOAs), FPN and the current methodology of (SPD x BMCAEC). This analysis was conducted for the coal, gas, nuclear and pumped storage BM Units. As the nuclear BM Unit

had no BOA activity there was no difference between the FPN and QME data. The QME for coal showed a definite, though not drastic, improvement in accuracy over the FPN submissions. For the gas BM Unit, QME was slightly more accurate, and decreased underestimation of the Metered Volumes compared with FPN. Use of QME for the estimation of Metered Volume for the pumped storage BM Unit was much more accurate than FPNs or the current methodology, and removed the consistent overestimation of the Metered Volume that the FPNs exhibited. The Group was therefore comfortable that the use of QME would make the estimation of Metered Volumes for pumped storage BM Units sufficiently accurate for the purposes of the CEI calculation and Credit Cover arrangements.

The analysis of a wind generator BM Unit with an output greater than 100MW (see graphs 1(k), 1(l)) shows that its submitted FPNs give a good estimation of its actual Metered Volumes over a Settlement day. The estimation is significantly more accurate than the current methodology. Examination of a wind generator BM Unit with an output less than 100MW (see graphs 1(m), 1(n)), i.e. an exemptable generator, that is not compelled to submit FPNs, showed that its FPNs were fairly accurate, and more accurate than the current methodology, though they consistently underestimated the Metered Volumes of the BM Unit. The raw data for this smaller wind generator showed that it was inherently difficult to accurately predict its Metered Volume.

The wind BM Units were included specifically as examples of what might be considered 'intermittent' generators, i.e. those that could not be expected to perform at a consistent level over a sustained period of time. Other types of plant that the Group considered as intermittent were wave and tide powered generators. The number of examples of such intermittent generators available to the Group was limited, and no examples of other types of intermittent generators were available besides the two wind-generation BM Units discussed above.

Having considered and compared the accuracy of FPNs, QME and the current methodology (CALF x GC) as estimates of the Metered Volumes of examples of the various BM Unit types, the Group concluded that QME and FPNs were both more accurate than the current methodology. However, the Group noted that such increased accuracy would introduce more volatility into the Credit Cover arrangements, and considered that though a benefit might be gained in terms of the accuracy of Metered Volume estimation by the use of QME or FPNs, the benefit of this accuracy was offset to a degree by this increased volatility. The Group considered that the added volatility would reduce the benefit of greater accuracy, rather than removing it completely.

### **3.13 Implementation Approach**

The Group has not yet been able to consider the potential implementation approach for the Proposed Modification or Alternative Modification because a BSC Agent IA has not yet been completed and because a final Alternative Modification has not been selected from among the potential Alternatives the Group has considered.

## **4 ASSESSMENT OF MODIFICATION AGAINST APPLICABLE BSC OBJECTIVES**

This section outlines the initial views of the Modification Group regarding the merits of P215 against the Applicable BSC Objectives.

### **4.1 Proposed Modification**

The initial **MAJORITY** view of the Modification Group was that the Proposed Modification **WOULD NOT** better facilitate the achievement of Applicable BSC Objective (c) when compared to the current Code baseline, for the following reasons:

### Applicable BSC Objective (c)

- Though the Proposed Modification would generally be a better, more accurate proxy for the Metered Volume of BM Units than the current method, it does not work adequately for some types of BM Unit such as pumped storage and small wind generators.
- Though the methodology of the Proposed Modification would be more accurate by volume than the baseline, it would generally lead to under-securitisation, increasing the general level of risk for Parties.

The initial **MINORITY** view of the Modification Group was that the Proposed Modification **WOULD** better facilitate the achievement of Applicable BSC Objective (c) when compared to the current Code baseline, for the following reasons:

### Applicable BSC Objective (c)

- Despite variation in the increase of accuracy varies for different BM Unit types, the methodology of the Proposed Modification is a more accurate proxy for the Metered Volumes of qualifying BM Units.

The initial **MAJORITY** view of the Modification Group was that the Proposed Modification **WOULD** better facilitate the achievement of Applicable BSC Objective (d) when compared to the current Code baseline, for the following reasons:

### Applicable BSC Objective (d)

- The arrangements of the Proposed Modification are simpler than the current arrangements (i.e. which involve administration of the CALF process and appeals and monitoring of CALF values).
- The accuracy of the Credit Cover arrangements would be increased; increased accuracy leads to increased efficiency.

The initial **MINORITY** view of the Modification Group was that the Proposed Modification was **NEUTRAL** in relation to the facilitation of the achievement of Applicable BSC Objective (d) when compared to the current Code baseline, for the following reasons:

### Applicable BSC Objective (d)

- A BSC IA had not been performed when the views of the Modification Group were gathered; some members believed they could not make a judgement on the efficiency impact of the Proposed Modification until they had details of the estimated impact of implementation.

The Group agreed by majority that the Proposed Modification would have a neutral impact on Applicable BSC Objectives (a) and (b). A single dissenting member believed that the Proposed Modification would not better facilitate the achievement of Applicable BSC Objectives (a) and (b) because they believed that a potential, perceived incentive to game with FPN submissions would be introduced, which would have a negative impact on both the ability of the Transmission Company to discharge the obligations of the Transmission Licence and on the efficient, economic and co-ordinated operation of the GB transmission system.

## 4.2 Alternative Modification

The initial **UNANIMOUS** view of the Modification Group was that all the Alternative Modification options **WOULD** better facilitate the achievement of Applicable BSC Objective (c) when compared to the Proposed Modification, for the following reasons:

### Applicable BSC Objective (c)

- Accuracy of the estimation of BM Units' Metered Volumes is increased, compared with the Proposed Modification.
- The incorporation of additional data compared with the Proposed Modification (i.e. either BOA volumes, BOA volumes and MEL comparison or earlier AEI period via a Credit Cover Run) removes the concern that Parties would be under-secured.

The Group also believed that all the Alternative Options would be better than the current baseline as they increase the accuracy of the information entering the Credit Cover arrangements.

The Group agreed by majority that Alternative Modification options 1 and 2 would have a neutral impact on Applicable BSC Objective (a) and (b). A single dissenting member believed that options 1 and 2 would not better facilitate the achievement of Applicable BSC Objectives (a) and (b) because the concerns around gaming FPNs remained.

The Group unanimously agreed that Alternative Modification options 3 and 4 would have a neutral impact on Applicable BSC Objective (a) and (b).

The Group agreed by majority that all the Alternative Modification options would have a neutral impact on Applicable BSC Objective (d). A single member disagreed, as they believed that all the options would better facilitate Applicable BSC Objective (d) because all are more accurate, and as such would all ultimately lead to increased efficiency.

## 5 TERMS USED IN THIS DOCUMENT

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

Acronym/Term	Definition
FPN	Final Physical Notifications
CEI	Credit Assessment Energy Indebtedness
CALF	Credit Assessment Load Factors
GC	Generation Capacity
DC	Demand Capacity
P/C	Production/Consumption
QM	BM Unit Metered Volume
CVA	Central Volume Allocation
SVA	Supplier Volume Allocation
CAQCE	Credit Assessment Credited Energy Volume
QABC	Account Bilateral Contract Volume
BMCAEC	BM Unit Credit Assessment Export Capability
BMCAIC	BM Unit Credit Assessment Import Capability
SAA	Settlements Administration Agent
SVAA	Supplier Volume Allocation Agent

CDCA	Central Data Collection Agent
PN	Physical Notification
NG	National Grid
QME	Period Expected Metered Volume
ECVAA	Energy Contract Volume Aggregation Agent
EDT	Electronic Data Transfer

## 6 DOCUMENT CONTROL

### 6.1 Authorities

Version	Date	Author	Reviewer	Reason for Review
0.3	31/10/07	Dean Riddell	David Jones	For technical review
0.4	01/11/07	Dean Riddell	P215 Mod Group	For Modification Group review
1.0	02/11/07	P215 Modification Group		For industry consultation
1.0	02/11/07	P215 Modification Group		For impact assessment

## APPENDIX 1: APPLICABLE BSC OBJECTIVES

For reference the Applicable BSC Objectives, as contained in the Transmission Licence, are:

- (a) The efficient discharge by the licensee [i.e. the Transmission Company] of the obligations imposed upon it by this licence [i.e. the Transmission Licence];
- (b) The efficient, economic and co-ordinated operation of the GB transmission system;
- (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;
- (d) Promoting efficiency in the implementation and administration of the balancing and settlement arrangements.

## APPENDIX 2: PROCESS FOLLOWED

[Tailor the following table to the individual Modification Proposal so that events are listed chronologically. If the proposal has also been through a Definition Procedure, cut and paste details of that procedure from the Definition Report]

Copies of all documents referred to in the table below can be found on the BSC Website at: <http://www.elexon.co.uk/changeimplementation/ModificationProcess/modificationdocumentation/modProposalView.aspx?propID=235>.

Date	Event
27/07/07	Modification Proposal raised by Name of Proposer
09/08/07	IWA presented to the Panel
14/08/07	First Definition Procedure Modification Group meeting held
23/08/07	Definition Procedure consultation issued
31/08/07	Definition Procedure consultation responses returned
04/09/07	Second Definition Procedure Modification Group meeting held
13/09/07	Definition Report presented to the Panel
20/09/07	First Assessment Procedure Modification Group meeting held
27/09/07	Second Assessment Procedure Modification Group meeting held
16/10/07	Third Assessment Procedure Modification Group meeting held
24/10/07	Fourth Assessment Procedure Modification Group meeting held
29/10/07	Fifth Assessment Procedure Modification Group meeting held
02/11/07	Request for Party/Party Agent impact assessment issued
05/11/07	Requirements Specification issued for BSC Agent impact assessment

## ESTIMATED COSTS OF PROGRESSING MODIFICATION PROPOSAL<sup>5</sup>

<b>Meeting Cost</b>	£3,000
<b>Legal/Expert Cost</b>	£5,000
<b>Impact Assessment Cost</b>	£10,000
<b>ELEXON Resource</b>	94 man days £20,260

These costs have changed from those provided in the Definition Report, to reflect that a meeting of the P215 Modification Group was held, in addition to those previously scheduled to take place in the Assessment phase.

### MODIFICATION GROUP MEMBERSHIP

Member	Organisation	14/8	04/9 (Tel)	20/9	27/9	16/10	24/10	29/10
David Jones	ELEXON (Chairman)	Y	Y	Y	N	Y	Y	Y
Dean Riddell	ELEXON (Lead Analyst)	Y	Y	Y	Y	Y	Y	Y
Rekha Patel	Proposer's representative	Y	Y	Y	Y	Y	Y	Y
Lillian Macleod	National Grid	N	Y	N	Y	Y	Y	Y
Ben Sheehy	E.ON UK	Y	Y	Y	Y	Y	Y	Y
Dave Wilkerson	Centrica	N	Y	Y	N	Y	N	Y
Andrew Colley	Scottish and Southern	Y	Y	N	Y	Y	Y	Y
Colin Prestwich	Smartest Energy	Y	Y	Y	Y	N	Y	N
Edward Hunter	npower	Y	Y	Y	Y	Y	Y	Y
Gary Henderson	SAIC	Y	Y	Y	Y	Y	Y	N

Attendee	Organisation	14/8	04/9 (Tel)	20/9	27/9	16/10	24/10	29/10
Natasha Hall	ELEXON (Lawyer)	N	N	Y	N	N	N	Y
Richard Hall	Ofgem	Y	Y	Y	Y	Y	Y	Y
Tom Selby	E.ON UK	N	N	Y	N	N	N	N

<sup>5</sup> Clarification of the meanings of the cost terms in this appendix can be found on the BSC Website at the following link:  
[http://www.elexon.co.uk/documents/Change\\_and\\_Implementation/Modifications\\_Process\\_-\\_Related\\_Documents/Clarification\\_of\\_Costs\\_in\\_Modification\\_Procedure\\_Reports.pdf](http://www.elexon.co.uk/documents/Change_and_Implementation/Modifications_Process_-_Related_Documents/Clarification_of_Costs_in_Modification_Procedure_Reports.pdf).

Mark Gribble	Logica	Y	N	Y	Y	Y	Y	Y
John Guest	Logica	N	N	N	Y	Y	Y	Y
Rob Smith	National Grid	N	N	Tel	N	N	N	N
Emrah Cevik	ELEXON	Y	Y	Y	Y	Y	N	Y
Roger Harris	ELEXON	Y	Y	Y	Y	Y	Y	Y

## **MODIFICATION GROUP TERMS OF REFERENCE**

### **TERMS OF REFERENCE**

**(Version 1.0)**

#### **APPENDIX FOR MODIFICATION PROPOSAL P215**

**Modification Proposal P215 will be considered by the P215 Modification Group formed from members of the Settlement Standing Modification Group (SSMG), whose areas of expertise include Credit Cover arrangements, BM Unit Classification and Central Volume Allocation.**

#### **P215 – Revised Credit Cover Methodology for Generating BM Units**

##### **1. DEFINITION PROCEDURE**

- 1.1 The Modification Group will carry out a Definition Procedure in respect of Modification Proposal P215 pursuant to section F2.5 of the Balancing and Settlement Code.
- 1.2 The Modification Group will produce a Definition Report for consideration at the BSC Panel Meeting on 13 September 2007.
- 1.3 The Modification Group shall consider and/or include in the Definition Report as appropriate:
  - The definition of a generating BM Unit to which Modification Proposal P215 is applicable, including consideration of:
    - Parameters available for use as basis of a definition (e.g. Production/Consumption Status);
    - Use of historical data to assign status as a generating BM Unit;
    - Impact of a dynamic approach, e.g. based on producing/consuming status each Settlement Period;
    - Impact of the ability of Exempt Export BM Units to choose their P/C Status (i.e. regardless of the Status assigned to the Trading Unit to which they belong);
    - Impact of possible definitions on Central Systems, NG systems and Party systems;
    - Any impact of possible definitions on the submission of Final Physical Notifications (e.g. would FPN submission be mandatory for all such 'generating BM Units');
    - Considerations and outcome of the P200 Modification Group's assessment of a similar definition and any relevant considerations/analysis of Standing Issue 22;
    - Whether status as such a 'generating BM Unit' should be voluntary;
    - Any analysis that can be performed to support consideration of a definition (e.g. to identify types/groups of BM Units that submit accurate FPNs);

- The possible definitions considered by the Group, and the Group's favoured definition(s); and
- The results of an Industry Consultation on the views of the Modification Group on the definition of a generating BM Unit.

**2. ASSESSMENT PROCEDURE**

- Demonstration of the defect in the existing Code requirements as a result of the current Credit Cover arrangements;
- The material impact of the provisions of P215 in relation to the risk of over- and under-collateralisation by Parties as a result of the BSC Credit Cover arrangements;
- Potential discrimination between generating and consuming BM Units;
- Any relevant precedents from P140 and the interconnector use of FPN in CEI calculation;
- Any consequential impact of using FPN instead of CALF and GC/DC on the BSC, Grid Code or other codes and associated processes - impact on BSC Panel processes should be minimised and where Panel involvement is necessary there should be a guideline process and criteria;
- Whether submission of FPN would be mandated for all generating BM Units, and whether this would include BM Units with output < 50MW (and the impact of mandating for < 50MW);
- A default position for the P215 provisions if FPN is not submitted, e.g. for interconnectors the ECVAA system uses the latest available FPN in calculations and if no previous FPN exists for the BM Unit the FPN value defaults to zero;
- Whether there are any implications of using FPN data for a purposes other than it was originally intended, i.e. any impact of using FPN in the Credit Cover calculation in addition to it being used by the System Operator (SO), for instance would FPN become a more commercial parameter, and would this affect the SO's ability to balance the System.
- Impact on National Grid of additional FPN data (i.e. from < 50MW generators if FPN submission is mandatory, or optional but attractive);
- Impact of data requirements, for instance if the ECVAA needs data (e.g. QM) it does not currently possess to determine a BM Unit's generating status, is there an impact on BSC Agents that would supply the data, e.g. the SAA;
- Impact on Central Systems; and
- The accuracy of FPNs compared with actual Metered Volumes.

**APPENDIX 3: RESULTS OF INITIAL ASSESSMENT**

**a) Impact on BSC Systems and Processes**

BSC System / Process	Potential Impact of Proposed Modification
ECVAA System	The ECVAA system currently uses FPN data only in Credit Checking for Interconnector BM Units: potential impact on software, CSDs, other configurable items

BSC System / Process	Potential Impact of Proposed Modification
BMRA System	Should not be substantial impact if systems operate as currently understood: check for possible impact on CSDs and other configurable items
NGT System	Should not be substantial impact if systems operate as currently understood: check for possible impact on software, CSDs and other configurable items. (important as TC would supply FPN data)

#### **b) Impact on BSC Agent Contractual Arrangements**

No impact identified.

#### **c) Impact on BSC Parties and Party Agents**

Generators and, depending on the scope of P215 Licence Exemptable Generators, would be impacted (i.e. depending on what falls under the definition of 'generating BM Unit').

The Credit Cover methodology applied to those Parties impacted would be changed, as proposed by P215, with a consequent effect on the amount of Credit Cover they need to lodge. There may be an impact on Parties submission of FPNs, particularly if a change affected Parties for which at the moment submission of FPNs is not mandatory; if there was a requirement or an incentive for these Parties to submit FPNs, changes to their processes and systems might be needed.

No impact on BSC Party Agents identified.

#### **d) Impact on Transmission Company (IWA estimate only)**

The Transmission Company already supplies FPN information to the ECVAA (via the BMRA), which uses FPNs only in the area of Credit Checking for Interconnector BM Units. However, all other FPN information received from the Transmission Company, though not used in any subsequent calculations, is loaded into the ECVAA system. Therefore, there should be no impact in this respect, though as ECVAA would be relying on the Transmission Company to supply FPN data, this must be confirmed.

It is possible that the Transmission Company may have to handle an increased amount of FPN data if a requirement is introduced for FPN submission by generators with output < 50MW (or if submission by such generators remains optional but there is an incentive for them to submit FPNs). The impact of this possibility may need to be assessed.

**e) Impact on BSCCo**

Area of Business	Potential Impact of Proposed Modification
Change Implementation	Implementation of changes to configurable items and other system documentation.  Management of solution development and arranging participant testing, in conjunction with the ECVAA service provider.
CVA Data/Operations	Amendment of guidance documentation, information sheets, LWIs.  Provide information for Trading Operations Report, provide support to Industry on the new methodology.  Train staff in the new methodology, support implementation.
Corporate Services	Support implementation – assurance, audit software development.
Legal	Support assessment and implementation.

**f) Impact on Code**

Code Section	Potential Impact of Proposed Modification
Section M	M1.2.3 changed in accordance with P215.
Section Q	Contains the provisions for submissions of FPNs; if any change was made to the requirements around submission of FPNs for generators with output < 50MW, section Q would be impacted.

**g) Impact on Code Subsidiary Documents**

Document	Potential Impact of Proposed Modification
ECVAA Service Description	Add the new algorithm for the calculation of CEI for Generating BMUs from the FPN (and for calculating the total CEI for a Party).  Amend the ECVAA-I014.
CVA Data Catalogue	Amend the ECVAA-I014.
BMRA Service Description	Possible impact, dependent on current system operation.

**h) Impact on Core Industry Documents/System Operator-Transmission Owner Code**

[Outline:

- The impact of the Proposed/Alternative Modification on the Core Industry Documents/STC;
- The impact of the Proposed/Alternative Modification on the computer systems and processes used in connection with the operation of arrangements established under the Core Industry Documents and/or the STC; and
- The mechanism, likely timescale and estimated costs for making the required changes to the above.

Document	Potential Impact of Proposed Modification
Grid Code	Contains requirements for FPN submission; any change was made to BSC section Q would need to be reflected in the Grid Code (i.e. if any change was made to the requirements around submission of FPNs for

Document	Potential Impact of Proposed Modification
	generators with output < 50MW).

**i) Impact on Other Configurable Items**

Document	Potential Impact of Proposed Modification
Logica IDD part 1	Amend the ECVAA-I014.
BMRA URS	Possible impact, dependent on current system operation.

**j) Impact on BSCCo Memorandum and Articles of Association**

No impact identified.

**k) Impact on Governance and Regulatory Framework**

No impact identified.

**APPENDIX 4: P215 ANALYSIS**

The analysis considered by the Group is included as Attachment 1.

**APPENDIX 5: FPN 'GAMING' ANALYSIS**

The specific FPN 'gaming' analysis considered by the Group is included as Attachment 2.