

Stage 03: Assessment Report

What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

P253: Improving the accuracy of the Credit calculation

P253 seeks to improve the accuracy of the credit calculation by including actual SVA (supplier) data in the II Settlement Run (5 working day after real-time) so that it can be used in the credit calculation.



Modification Group recommends
Approval of P253



High Impact:
Suppliers, Half Hourly Data Aggregators, Half Hourly Data Collectors, Supplier Volume Allocation Agent (SVAA), Settlement Administration Agent (SAA)



Medium Impact:
Central Data Collection Agent (CDCA)

P253
Assessment Report

03 September 2010

Version 1.0

Page 1 of 15

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Any questions?

Contact:
Andrew Wright



**andrew.wright@elexon
.co.uk**



020 7380 4217

Contents

1	Summary	3
2	Why Change?	5
3	Solution	7
4	Potential Alternative Solution (P265)	9
5	Impacts & Costs	10
6	Implementation	12
7	Cost Benefit Analysis	13
8	The Case for Change	14
9	Recommendations	15
10	Further Information	15
	Attachment A : Detailed Assessment	15
	Attachment B : P253 Analysis	15
	Attachment C : Proposed Modification draft legal text	15

About this document:

This document is an Assessment Report, which ELEXON will present to the Panel on 9 September 2010, on behalf of the P253 Modification Group. The Panel will consider the recommendations on the final page, and agree an initial view on whether or not this change should be made.

There are 4 documents for this Assessment Consultation:

- This is the **main document**. It outlines the solution, impacts, costs, benefits and implementation approach for the change. It includes the Group's initial recommendation on whether the change should be approved.
- **Attachment A** provides further supporting details of how the Group's discussions have led it to its initial views.
- **Attachment B** contains the P253 analysis which informed the Group's views.
- **Attachment C** contains the Proposed Modification legal text.

P253
Assessment Report

03 September 2010

Version 1.0

Page 2 of 15

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Why Change?

Parties are required to lodge credit with ELEXON in order to cover their Trading Charges for the 29 day period between the Settlement Day and the Initial Settlement (SF) Run. To calculate the required credit cover an Interim Information (II) run is carried out 5 Working Days after the Settlement Day.

Currently the II run uses actual Metered Volumes from the Central Volume Allocation (CVA) market, but only estimated data for the Supplier Volume Allocation (SVA) market. This method of estimating Metered Volumes at the II Settlement Run causes the following issues:

- There can be inaccuracies in the forecasting of SVA data (particularly embedded intermittent generation);
- The estimation technique does not correctly forecast the usage around a Bank Holiday;
- The estimation technique uses a percentage of Grid Supply Point Group Takes (GSPGTs) in its calculations. An increase in embedded generation in some GSPs has resulted in GSPGTs approaching zero, making the credit calculations significantly inaccurate.

Solution

P253 would use actual Metered Volumes from SVA Half Hourly sites in the II Settlement Run. In order to do this:

- The Supplier Volume Allocation Agent (SVAA) would carry out an II Volume Allocation Run (VAR) and would then feed the data to the SAA for use in the II Run.
- Half Hourly Data Collectors and Data Aggregators would be required to provide Half Hourly Meter Reads in time for SVAA to use them in an II VAR.
- Non Half Hourly Data Aggregators would be required to provide aggregated Estimated Annual Consumption (EAC) values to the SVAA in time for the II VAR run.

Impacts & Costs

P253 impacts Suppliers, HHDA, HHDCs, SVAA and the SAA. The estimated BSC Agent implementation cost is £110,000. There would also be an annual ongoing cost of £4,000.

Implementation

The Group recommends that P253 should be implemented on:

- **03 November 2011** if an Authority decision is received on or before 19 November 2010; or
- **23 February 2012** if the Authority decision is received after 19 November 2010 but on or before 23 February 2011.

The Case for Change

The **majority** of the Modification Group believes that P253 will **better facilitate Applicable Objectives (c) and (d)** as it would:

- increase the certainty and confidence in the credit calculation for Parties, reducing the need for Parties to lodge more credit than is required and therefore assisting new entrants and smaller Parties, who generally have more difficulties in lodging credit;
- improve the accuracy of the credit calculation reducing unsecured credit risk and ensuring Parties with embedded generation would have their Energy Indebtedness more accurately calculated;
- resolve the current problems with estimating embedded generation, Bank Holidays and where GSP Group Take approaches zero; and
- lead to a reduction in the number of instances where material doubt needs to be raised.

The **minority** of the Group believed that P253 **did not better facilitate Applicable Objectives (d)** as the cost of implementation to the industry may not outweigh any benefits realised.

Related Changes – P265

Noting the potential cost to the industry of the proposed modification, the P253 Modification Group developed an Alternative solution which would only impact the BSC central systems. This solution addresses two areas of concerns:

- Amending the way Bank Holidays are more accurately estimated; and
- Making the credit calculations more robust to when the GSPGT approaches zero by changing the algebra used by the SAA to estimate Metered Volumes for Supplier BM Units at the II Run.

This solution would only impact the SVAA and SAA and has an estimated BSC Agent implementation cost of £125,500. However, it does not address the issue relating to accurately forecasting embedded generation.

The Group's unanimous view is that this alternative solution is better than the current arrangements and should be the minimum change that is approved as a result of their investigation. However, the majority of the Group believed the benefits of the Proposed Modification are greater than the benefits of the Alternative Modification. As such this alternative solution could not be carried forward under P253.

To ensure that a supported and developed solution is seen by the Authority alongside P253 a member of the Group has raised P265 which details the P253 proposed alternative solution. Further details on P253 can be found at [ELEXON - Modification P265](#)

Recommendations

The Group by majority recommend that P253 should be approved.

2 Why Change?

How does the Credit Calculation currently work?

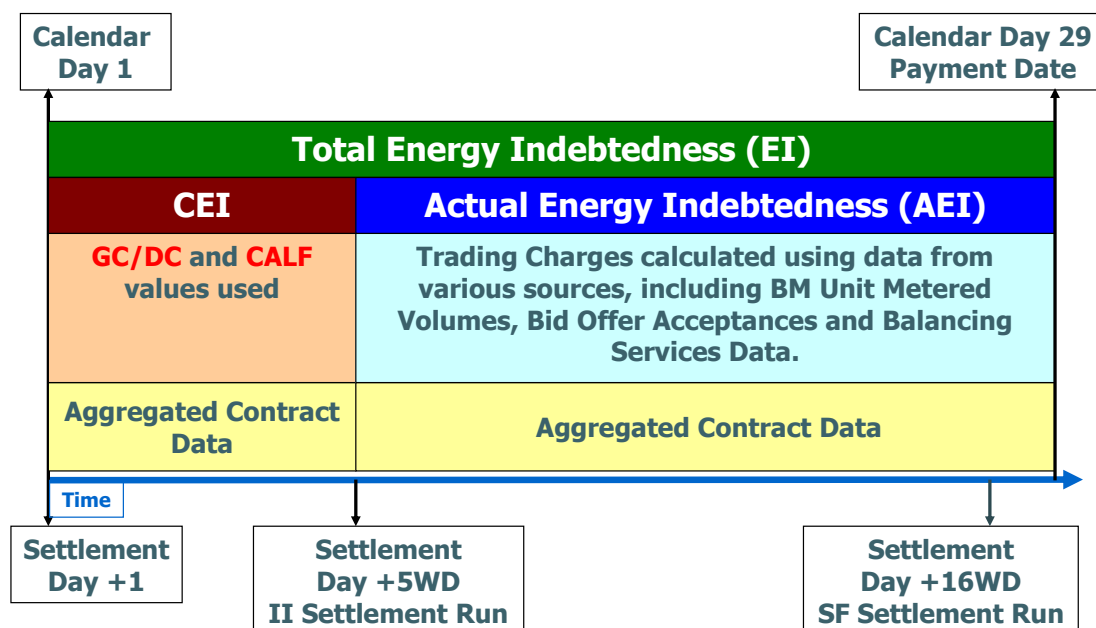
The Initial Settlement (SF) Run takes place 29 days after the Settlement Day. The SF Run determines what Trading Charges a Party owes, or is owed. Parties are required to lodge credit with ELEXON in order to cover their Trading Charges for the 29 day period between the Settlement Day and the SF Run. This ensures ELEXON has enough collateral to cover the Trading Charges if a Party cannot make them.

In order estimated the amount of credit a Party may need to lodge, the BSC Systems calculates their Energy Indebtedness. This is an estimation of a Parties imbalance volume over the 29 day period.

For each Settlement Period the Energy Indebtedness is made up of:¹

- **Credit Assessment Energy Indebtedness (CEI)** – an estimate of Energy Indebtedness used until we gather metered data after 5 Working Days. It is based on each BM Units contractual position at Gate Closure and the estimated position based on the Credit Assessment Load Factor (CALF) and the capacity of the BM Unit called Generating Capacity (GC) or Demand Capacity (DC);
- **Actual Energy Indebtedness (AEI)** – an estimate of a Party's Trading Charges for a given Settlement Period. Once calculated 5 Working Days after the Settlement Day, AEI replaces CEI.

Figure 1: High level example of the Credit Calculation



P253 is looking to change the way that we calculate Actual Energy Indebtedness, so it is worth looking more closely at how we calculate AEI.

Actual Energy Indebtedness

As noted above, AEI is an estimate of a Party's Trading Charges for a given Settlement Period. To calculate this estimate the BSC Systems carry out an II Run 5 Working Days after the Settlement Day. For Central Volume Allocation (CVA) BM Units we have actual Metered Volumes which to calculate Trading Charges for the II Run. However, the Metered

¹ Energy Indebtedness for Credit Qualifying BM Units is calculated slightly differently. Please see our [guidance note](#) for further information.

Volumes for Supplier Volume Allocation (SVA) BM Units are not available, so we have to estimate SVA Metered Volumes.

We estimate the SVA Metered Volumes by looking at the proportion of GSP Group Take (the total energy consumed by a specific GSP Group) that a Supplier used on a similar day that has completed its SF Run (approximately 3 weeks previously to the Settlement Day). For example, if today is a Thursday then we would look back to a Thursday 3 weeks ago where the SF run is complete. We then multiply this proportion by the GSP Group Take for the Settlement Period in question to get an estimated Metered Volume.

For more details of the current II Run calculation algebra, see Attachment A section 1.

What's the issue?

This current method of estimating Supplier BM Unit Metered Volumes at the II Settlement Run causes the following issues:

1. **There can be inaccuracies in the forecasting of SVA data** - some Half Hourly (HH) SVA sites (such as wind generation) don't follow a regular profile and can be unpredictable. This means that the electricity generated (or used) 3 weeks ago may not have a clear relationship with the current generation and therefore will not be accurately reflected in II data.
2. **The current method does not work for Bank Holidays** - a Supplier with mainly business customers would see considerably different metered volumes on Working Days and Bank Holidays. The current estimation method does not take this into account.
3. **The increase in embedded generation in some GSP Groups is causing the GSPGTs to approach zero** – Since SVA Metered Volumes are based on a percentage of GSPGT, the reduction in GSPGT makes it increasingly likely that the Metered Volumes are not reflective of changes in an individual Suppliers' position. This issue is likely to become more apparent as the level of embedded generation increases and the GSPGT for the calculation reference day approaches zero. As GSPGT approaches zero the current algebra causes both the estimated BM Unit Metered Volumes used in the credit calculation and the associated credit cover requirement to tend towards infinity. This then leads to Suppliers raising material doubt claims as the Supplier BM Unit Metered Volume is clearly incorrect.

Material Doubt Claims

If a Party's indebtedness is under or overestimated, they can lodge a material doubt claim. Increasing the number of Material Doubt claims raised would increase both cost and risk.

Cost is increased as additional work is required from both the Party raising the claim and ELEXON to gather supporting evidence, re-submit data every time there is a change in data (usually every working day) and to carry out analysis. Therefore each material doubt claim has a cost implication on both ELEXON and the Party.

Risk is increased, as whilst the Material Doubt claim is investigated a Party will bypass the Credit calculation process. This makes it much more difficult to pick up a Defaulting Party. Thus an increasing the likelihood of exposing other Parties to the risk of a Party defaulting when they have a material doubt claim active.

Over the last year 95% of all material doubt claims were related to unrepresentative indebtedness calculations. Increasing the accuracy of the Credit Calculation would reduce this figure.

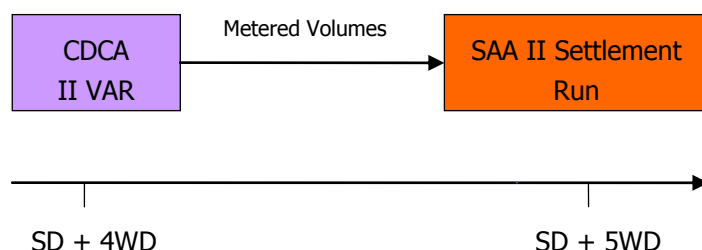
P253 suggests using actual Metered Volumes from SVA Half Hourly sites in the II Settlement Run. In order to do this:

- The Supplier Volume Allocation Agent (SVAA) would carry out an II Volume Allocation Run (VAR) and would then feed the data to the SAA for use in the II Run.
- Half Hourly Data Collectors and Data Aggregators would be required to provide Half Hourly meter reads in time for SVAA to use them in an II VAR.
- Non Half Hourly Data Aggregators would be required to provide aggregated Estimated Annual Consumption (EAC) values to the SVAA in time for the II VAR run.

What's the impact on BSC Systems?

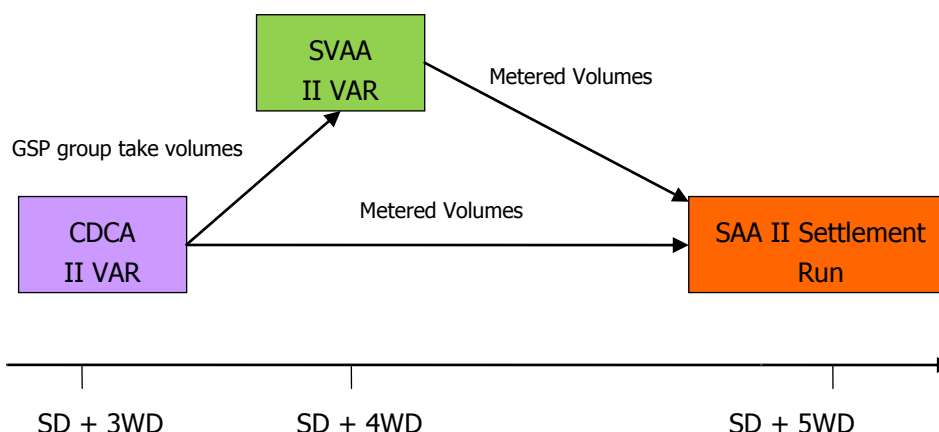
The current method for an II run is for the CDCA to conduct a Volume Allocation Run (VAR) 4 Working Days after the Settlement Day and to send the metered volumes to the SAA. The SAA then carries out the II Run using its estimated SVA metered volumes and the volumes provided by the CDCA.

Figure 2: Current timetable for BSC Systems to complete II Run



P253 would amend this process so that the CDCA would complete a VAR 3 Working Days after the Settlement Day whilst providing GSGPT volumes to the SVAA. SVAA would then complete its VAR 4 Working Days after the Settlement Day. 5 Working Days after the Settlement Day both the CDCA and the SVAA send their metered volumes to the SAA so they can commence the II Run.

Figure 3: Proposed P253 timetable for BSC Systems to complete II Run



Detailed solution requirements can be found in Attachment A.

What's the impact on Parties/Party Agents?

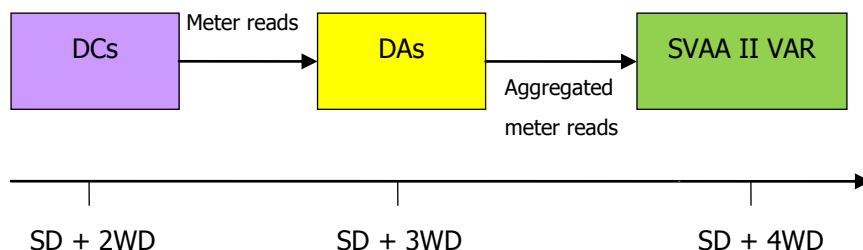
Currently, Data Aggregators must submit aggregated metered data to SVAA within 14 Working Days of the Settlement Date. P253 would significantly reduce that timescale.

The P253 solution requires Data Aggregators (both Half hourly and Non-Half hourly) to provide aggregated metered volumes to the SVAA within 3 Working Days of the Settlement Day i.e. in time for the SVAA II VAR.

Although Non Half-hourly Data Aggregators would not have any actual meter readings at this time, they will be required to provide aggregated Estimated Annual Consumption (EAC) values to SVAA.

In order for the Data Aggregators to submit the metered volumes to the SVAA in time for the SVAA II VAR, Half Hourly Data Collectors will be required to submit their Half Hourly Meter reads to the Data Aggregators 2 Working Days after the Settlement Day.

Figure 4: P253 Timetable for providing metered volumes to the SVAA



SVAA II Run reports – Obligations

The SVAA will not be issuing any II VAR reports (e.g. Supplier Settlement Reports, D0030 reports) to participants and such reports will be suppressed by the SVAA.

There is **no obligation on Data Aggregators** to suppress any II reports that they receive and no obligation on Data Aggregators to issue any II reports to Suppliers.

If Data Aggregators do not have the capability to suppress any II reports there is no obligation to stop them sending such files onwards (subject to agreement/negotiation with their customers). Equally, if a Supplier specifically wants to receive II files then (subject to agreement/negotiation with their Agent) there is no obligation stopping them.

As noted above, detailed solution requirements can be found in Attachment A

4 Potential Alternative Solution (P265)

Noting the potential cost to the industry of the proposed modification, the P253 Modification Group developed an Alternative solution which would only impact the BSC central systems. This solution addresses two areas of concerns:

- Amending the way Bank Holidays are more accurately estimated; and
- Making the credit calculations more robust to when the GSPGT approaches zero by changing the algebra used by the SAA to estimate Metered Volumes for Supplier BM Units at the II Run.

This solution would only impact the SVAA and SAA and has an estimated BSC Agent implementation cost of £125,500. However, it does not address the issue relating to accurately forecasting embedded generation.

The Group's unanimous view is that this alternative solution should be the minimum change that is approved as a result of their investigation. They believed unanimously that it is better than the current arrangements and **better facilitates Applicable Objectives (d)** as it would:

- Reduce the number of material doubt claims raised due to Settlement Days where a Bank Holiday is currently used as a reference day and where GSPGT approaches zero (a real problem which potentially could expose the industry to unlimited liabilities and will become more prevalent as the levels of embedded generation increase).

The majority of the Group thought it would also **better facilitate Applicable Objectives (c)** as it would:

- increase the certainty and confidence in the credit calculation for Parties, reducing the need for Parties to lodge more credit than is required and therefore assisting new entrants and smaller Parties, who generally have more difficulties in lodging credit.

Why progressed as P265?

When comparing the Proposed an Alternative solutions the majority of the Group believed that the Proposed solution would resolve the 3 issues of forecasting embedded generation, GSPGT approaching zero and the use of Bank Holidays. And would be an enduring solution which would improve the credit calculation for all Settlement Periods. They also believed that the alternative solution was only a partial solution, as it only applies to particular points in time – Bank Holidays and moments when GSP Group take approaches zero.

Under the BSC the Group only can progress an Alternative Modification where the majority believe the Alternative Modification is better than the Proposed Modification. The Group noted that the Alternative Modification was clearly better than the current arrangements and was disappointed that they could not progress it alongside the Proposed Modification in order to allow Ofgem to consider both solutions.

ELEXON noted that a Party could raise the Alternative Modification as a separated Modification Proposal. If they did this before the September Panel then it may be possible to recommend to the Panel that such a Modification Proposal could be sent to Report Phase, and be progressed in line with the Proposed Modification.

As a result **P265** has been raised which reflects the alternative solution as discussed by the P253 Group. P265 will be presented to the Panel on 09 September.

5 Impacts & Costs

Costs

ELEXON Cost		ELEXON Service Provider cost	Total Implementation Cost	ELEXON Service Provider cost
Man days	Cost	Implementation Cost		Ongoing Cost
180	£43,200	£110,000	£153,200	£4,000 annual

Indicative industry costs

Respondents provided a range of impacts. Two respondents noted impacts of around £100k to £150k. One respondent was unable to provide costs but considered the impacts to be significant and suggested a similar sized project had required 270 man days to implement. Other respondents assessed that there would minor to medium impacts to implement.

Impacts

BSC Parties / Party Agents

Type of Party / Party Agent	Potential impact
Supplier	There would be increased accuracy in the credit calculation and therefore their indebtedness would be more accurate. Reduce the need for material doubt claims, thus reducing the costs incurred in making a claim.
Half Hourly Data Collectors	Would be required to submit meter reads to the DA by two working days before the SVAA II VAR.
Data Aggregators	Would be required to submit data to the SVAA 1 working day before the II VAR.

Impact on BSC Systems and process

BSC System/Process	Potential impact
SAA	The SAA would be required to use HH SVA data in the II run.
SVAA	SVAA would be required to accept GSP Group take volumes from CDCA and use them in the II VAR. SVAA would be required to carry out a VAR at II and send the output to SAA.
CDCA	CDCA to submit GSP Group takes to SVAA before the II VAR

Impact on BSC Agent/service provider contractual arrangements

BSC Agent/service provider contract	Potential impact
BSC Agents	None identified.

Impact on ELEXON	
Area of ELEXON's business	Potential impact
Credit cover management	The improved credit calculation should decrease the number of material doubt claims ELEXON has to assess.

Impact on Code	
Code section	Potential impact
R5	CDCA to provide GSP group take data to SVAA for II.
Annex S-2	Obligation on NHHDA's to provide data to SVAA for II.
T4	Remove need for estimating HH SVA data.
T5	SVAA to send data to SAA.
U2	Change timing of VARs to include II.

Impact on Code Subsidiary Documents	
CSD	Potential impact
BSCP01	Change to VAR frequency.
BSCP502/503	Change in timescales to get II data to SVAA.
BSCP508/509	SVAA to carry out an II VAR and provide data to SAA.
SAA URS/ SD	To expect and use data from SVAA for II.
SVAA URS/SD	To provide data to SAA for II.
CDCA URS/SD	To provide group take to SVAA for II.
IDD Part 2	II data for SVAA run.

Impact on other Configurable Items	
Configurable Item	Potential impact
SAA/SVAA Settlement Calendar	Add in VAR dates.

The Modification Group consider a one year implementation time period to be appropriate for P253.

The Group also considers that P253 should be implemented in a scheduled BSC Systems Release. Considering the Authority's target of reaching a decision within 5 weeks of receiving the Final Modification Report (which is likely to happen on 19 October) gives the following Implementation Dates.

The Modification Group recommends that P253 Proposed Modifications should be implemented on:

- **3 November 2011** if an Authority decision is received on or before **19 November 2010**; or
- **23 February 2012**, if the Authority decision is received after **19 November 2010** but on or before **23 February 2011**.

BSC Agent timescales

The BSC Agents would require 8 months to implement P253.

Party and Party Agent timescales

The longest implementation timescale provided by impact assessment respondents for the Proposed Modification was one year.

7 Cost Benefit Analysis

The Group undertook a detailed Cost Benefit analysis of P253. Further information on this analysis can be found in section 4 of attachment A. How we calculated the benefits can be found in Attachment B pages 50 to 53.

The analysis showed the following benefits:

- 1) If P253 were implemented, Parties whose Energy Indebtedness is currently overestimated (when compared to the P253 solution) there would be a total annual saving of **£154,138** in the cost of credit for those Parties.
- 2) For those Parties for which the amount of credit cover required was underestimated using the current credit calculation when compared to P253, the average underestimation was **£234,481**. This would be the average amount that the industry might lose should one of these Parties enter administration.

It should be noted that this is a worst case scenario. We are assuming that a Party would go into administration when they are at the point of maximum under-estimation. It should also be noted that the risk of a Party going into administration should be considered low, although it does occur.

- 3) If a Party were to diminish its credit cover prior to entering Section H Default at a point when the error in the credit calculation was most favourable to that Party (i.e. the calculation was underestimating its credit requirement) then the average exposure to the industry would be **£2,990,091**. As with Benefit 2, it should be noted that this is a worst case scenario and the risk of a Party acting in this way could be considered low.

Conclusion

The majority of the Group believes the estimated benefits of the Proposed Modification clearly outweigh the known costs. The conclusions they made are:

1. If Parties who currently have overestimated Energy Indebtedness are prepared to reduce their credit cover to maintain the same credit cover percentage (50%) then those annual savings would outweigh the single year of BSC Agent Implementation costs (**£154,138 per year credit cost savings compared to a one off £110,000 implementation cost plus an annual £4,000 ongoing cost**)
2. Furthermore, if a Party who currently has an underestimated Energy Indebtedness were to go into administration, it is possible the industry could lose an average of **£234,481**. The Group noted this was a worst case scenario.
3. In addition, if a Party undertook a strategy to diminish its credit cover prior to entering Section H Default at a point when the error in the credit calculation was most favourable to that Party, then the average exposure of the industry would be **£2,990,091**. The Group noted this was a worst case scenario.

A minority of the Group believes the estimated benefits of the Proposed Modification would not outweigh the known costs. They were concerned that the Group had not identified the full industry costs, although every effort had been made to do so. They believed the assumed benefits were not overwhelming enough to outweigh the potential costs.

Why will P253 be better than the existing BSC arrangements?

The **majority** of the Modification Group believes the Proposed Modification **would better facilitate Applicable BSC Objectives (c)** as:

- P253 gives Parties a more accurate view of their credit exposure, increasing the certainty and confidence in the credit calculation. This would reduce the need for Parties to lodge much more credit than is required and give them an opportunity to reduce their cover, thus reducing their credit costs. This would increase competition as new entrants and smaller Parties, who generally have more difficulties in lodging credit, would need to go less 'long' when lodging credit.
- There would be a reduction in unsecured credit risk which is both a benefit against (c) and (d). It would be a benefit under (c) as all Parties would have their Energy Indebtedness more accurately calculated.
- Parties with embedded generation would have their Energy Indebtedness more accurately calculated.

The **majority** of the Modification Group believes the Proposed Modification **would better facilitate Applicable BSC Objectives (d)** as P253 would:

- improve the accuracy of the credit calculation:
 - with regards to embedded generation.
 - on the Bank Holidays and for Settlement Days where a Bank Holiday is currently used as a reference day.
 - where GSPGT approaches zero. This is a real problem which will become more prevalent as the levels of embedded generation increase.
- lead to a reduction in the number of instances where material doubt needs to be raised when the GSP Group Take tends to zero. There would be a general increase in the accuracy of the credit calculation, leading to fewer manual interventions by ELEXON and their Agents in the credit process.
- lead to a reduction in unsecured credit risk which is both a benefit against (c) and (d). It would be a benefit under (d) as the default process is a manual and time consuming process for ELEXON to administer.
- more accurately model the changes in Energy Indebtedness around the contract change periods.

A **minority** of the Group believe the Proposed Modification **would not better facilitate Applicable BSC Objectives (d)** as:

- P253 appears to be potentially expensive to implement for Party Agents as they would have to provide Half Hourly Metered Volumes and EACs in shorter timescales. However, these costs have only been alluded to and no actual estimates were returned in the Impact Assessment.
- The Proposed Modification would have a £4,000 ongoing cost to store the additional data.

9 Recommendations

The P253 Modification Group invites the Panel to:

- AGREE an initial recommendation that Proposed Modification P253 should be made;
- AGREE an initial Implementation Date for Proposed Modification P253 of
 - 3 November 2011 if an Authority decision is received on or before 19 November 2010; or
 - 23 February 2012, if the Authority decision is received after 19 November 2010 but on or before 23 February 2011.
- AGREE the draft legal text for Proposed Modification P253;
- AGREE that Modification Proposal P253 be submitted to the Report Phase; and
- AGREE that ELEXON should issue P253 draft Modification Report for consultation and submit results to the Panel to consider at its meeting on 14 October 2010.

10 Further Information

More information is available in

Attachment **A**: Detailed Assessment

This information includes:

- Further information on the current Supplier BM Unit estimation process
- Modification Group membership
- Modification Group discussions
- Summary of the analysis
- Process followed for P253

Attachment **B**: P253 Analysis

Attachment **C**: Proposed Modification draft legal text

All consultation and impact assessment responses are on the P253 page of the ELEXON website.