Draft Modification Report

P326 'Introduction of a non-Working Day adjustment to the Credit Cover Percentage calculation'

P326 proposes to introduce a method to account for reductions in Supplier demand on non-Working Days within the Credit Cover calculations. This would allow the calculation to better reflect actual demand and increase the accuracy of the level of Credit Cover that Parties are required to lodge.

The BSC Panel initially recommends **approval** of the P326 Alternative Modification and **rejection** of the P326 Proposed Modification

This Modification is expected to impact:

- Suppliers
- The Central Registration Agent (CRA)
- The Energy Contract Volume Allocation Agent (ECVAA)
- ELEXON

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Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

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About This Document

This is the P326 Draft Modification Report, which ELEXON will present to the Panel at its meeting on 14 April 2016. It includes the responses received to the Report Phase Consultation on the Panel's initial recommendations. The Panel will consider all responses, and will agree a final determination under Self-Governance on whether the change should be made.

There are six parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, benefits/drawbacks and proposed implementation approach. It also summarises the Workgroup's key views on the areas set by the Panel in its Terms of Reference, and contains details of the Workgroup's membership and full Terms of Reference.
- Attachment A contains the detailed analysis carried out by ELEXON on behalf of the P326 Workgroup and the detailed solution requirements for both solutions.
- Attachment B contains the draft redlined changes to the BSC for the P326 Proposed Modification.
- Attachment C contains the draft redlined changes to the BSC for the P326 Alternative Modification.
- Attachment D contains the full responses received to the Workgroup's Assessment Procedure Consultation.
- Attachment E contains the full responses received to the Panel's Report Phase Consultation.

Contact

David Kemp

020 7380 4303

david.kemp@elexon.co.uk

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1 Summary

Why Change?

Some Suppliers have a significant reduction in their demand across non-Working Days, for example due to a portfolio of large industrial sites that shut down across the weekend. The Credit Assessment Energy Indebtedness (CEI) part of the Credit Cover calculation does not take this into account, and continues to assume the Supplier consumes the same amount of energy at the weekend as it does during the week. This overestimation of demand can result in the level of Credit Cover required being greater than should be needed based on the Supplier's actual demand.

Solutions

The **Proposed Modification** would introduce a Demand Capacity Factor (DCF) into the calculation of the BM Unit Credit Assessment Import Capability (BMCAIC) for Supplier BM Units. This factor will be based on the ratio of the Supplier BM Unit's average non-Working Day demand as a ratio of its average Working Day demand. A factor will be calculated for each Supplier BM Unit for each BSC Season, and will be based on its performance during the corresponding Reference Season.

The **Alternative Modification** would see two Credit Assessment Load Factor (CALF) values calculated for Supplier BM Units. One will be calculated for use on Working Days and the other for use on non-Working Days. These values would be calculated as currently, except that each value would use only the relevant sub-set of days (Working Day or non-Working Day) from the Reference Season.

Impacts & Costs

P326 is not expected to require any implementation effort for any participants. However, Suppliers are likely to see a change in their Credit Assessment Credited Energy Volumes, which may affect the level of Credit Cover they are required to lodge.

P326 will impact the Central Registration Agent (CRA) and the Energy Contract Volume Allocation Agent (ECVAA). The central costs of the Proposed Modification will be approximately £157,000, and the central costs of the Alternative Modification will be approximately £153,000.

Implementation

P326 is proposed for implementation on **23 February 2017** as part of the February 2017 BSC Systems Release.

Recommendation

The Panel initially unanimously believes that both solutions would better facilitate Applicable BSC Objective (c) and that the Alternative Modification would be better than the Proposed Modification. It therefore recommends that the **Alternative Modification should be approved**. By majority, the Panel agreed that P326 should be progressed as a Self-Governance Modification.

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What is Credit Cover?

Under the BSC each Trading Party is required to pay Trading Charges to ELEXON (as BSCCo) for each Settlement Day. Trading Charges are determined in accordance with Section T 'Settlement and Trading Charges'. Payments for Trading Charges incurred on a Settlement Day are typically made by Trading Parties 29 calendar days later. Therefore, at any given time a BSC Party may have debts for Trading Charges incurred over the previous 29 Days.

Each Party is required to lodge Credit Cover based on their accumulated debt. The purpose of this cover is to ensure that, should a Party be unable to pay any Trading Charges incurred, ELEXON holds sufficient collateral to cover the debt. If a Party does not have sufficient Credit Cover they will enter into Credit Default in accordance with Section M 'Credit Cover and Credit Default'.

The BSC does not specify the amount of Credit Cover that Parties must provide. It is instead left to Parties to determine the appropriate level of Credit Cover. However, a Party must ensure that their Credit Cover Percentage (CCP), measured as a Party's total indebtedness as a ratio of the total Credit Cover it has lodged, remains below 80%.

Further information

Further information on **Credit Cover** can be found in our Credit Cover Guidance Note, available on the Credit page of our website.

Further information on **GC/DC** and **CALF** can be found on the GC/DC and CALF pages of our website.

What is Energy Indebtedness?

ELEXON performs a credit check process every half hour to ensure that each Party's accumulated debt, known as its Energy Indebtedness (EI), over the 29 day period has not exceeded the 80% CCP threshold. The EI for each Settlement Period is calculated as the sum of the following over the previous 29 days:

- Credit Assessment Energy Indebtedness (CEI);
- Metered Energy Indebtedness (MEI); and
- Actual Energy Indebtedness (AEI).

The Metered Volumes (or estimated Metered Volumes where actual values are unavailable) for every Balancing Mechanism (BM) Unit are aggregated to a Party level, accounting for any Metered Volume Reallocation Notifications (MVRNs), and used to produce a Party's overall EI figure.

Credit Qualifying BM Units

Credit Qualifying BM Units are BM Units that:

- Submit Final Physical Notifications (FPNs);
- Are not an Interconnector BM Unit; and
- Are at least one of:
  - A Production BM Unit;
  - An Exempt Export BM Unit; or
  - Approved as Credit Qualifying by the Panel.

In these cases, the BM Unit's FPNs are used in the determination of its CEI, and not the CAQCE value.

How is Credit Assessment Energy Indebtedness calculated?

Metered Volumes are typically received five Working Days after the Settlement Day. Until this time a Party's EI must be calculated using estimations of their Metered Volume. This particular calculation forms the CEI portion of the Party's total EI.

Under the current arrangements, an estimate of a Party's Metered Volume (with MVRNs applied), known as its **Credit Assessment Credited Energy Volume (CAQCE)**. For BM Units that are not Interconnector BM Units or Credit Qualifying BM Units, this is calculated from the following parameters:

- **Generation and Demand Capacities (GC/DC)**: The Lead Party of each BM Unit is required to notify the CRA prior to each BSC Season of the maximum anticipated net export and net import of the BM Unit over the forthcoming Season.

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- **Credit Assessment Load Factor (CALF)**: Prior to each BSC Season, ELEXON calculates a CALF for each BM Unit based on its performance in the same BSC Season in the previous calendar year (the Reference Season) (e.g. the values for Autumn 2015 were based on performance in Autumn 2014). A BM Unit's CALF is calculated as its average Metered Volume in the Reference Season as a ratio of its maximum Metered Volume. The full calculation method is detailed in the CALF Guidance Document.

Using these parameters, the CRA calculates two further parameters for each BM Unit:

- the **BM Unit Credit Assessment Import Capability (BMCAIC)**; and
- the **BM Unit Credit Assessment Export Capability (BMCAEC)**.

These two parameters are calculated as:

- BMCAIC = CALF * DC
- BMCAEC = CALF * GC

These equations produce a flat line estimate of the Metered Volume across each Settlement Day and Settlement Period in MW. Depending on whether the BM Unit is classed as a Production or a Consumption BM Unit, the appropriate value is then multiplied by the **Settlement Period Duration (SPD)** to produce the CAQCE value in MWh for that BM Unit. MVRNs are then applied so that any reallocations of Metered Volume are captured in the credit calculation.

The sum of the CAQCE values across all the relevant BM Units is then compared to the sum of the **Account Bilateral Contract Volume (QABC)** across both Energy Accounts of the relevant Party. The sum of the QABC values shows a Party's position in any given half hour based on the Energy Contract Volume Notifications (ECVNs) it submitted. The Party's CEI is the difference between the CAQCE value and the sum of the QABC values.

SECALF qualifying BM Units

Any Supplier BM Unit with a DC of zero and a GC greater than zero will also have a Supplier Export CALF (SECALF) value calculated. These BM Units are referred to as 'SECALF qualifying' BM Units.

The BMCAEC value for SECALF qualifying BM Units is calculated as:

BMCAEC = SECALF * GC

For as long as a Supplier BM Unit is SECALF qualifying, it will use this BMCAEC value in the determination of its CEI, and will not use the BMCAIC value.

What is the issue?

The Proposer notes recent industry recognition that Parties lodge significantly more Credit Cover than is actually necessary. They believe that one of the reasons for this is a limitation in the calculation of CEI.

Some Suppliers have a significant reduction in their demand across non-Working Days. This can occur when, for example, a Supplier has a portfolio of large industrial sites that shut down across the weekend. The flat CEI estimate does not take this into account, and continues to assume the Supplier consumes the same amount of energy at the weekend as it does during the week. This results in the CEI calculation determining that the Supplier is short (i.e. it has consumed more energy than it purchased), increasing the Party's overall EI. This feeds into the CCP calculation, resulting in the Party's CCP increasing. This increase can become more significant around bank holidays (in particular the Christmas and Easter periods) when there are more non-Working Days to account for.

Currently the CEI calculation for Supplier BM Units does not allow for any non-Working Day variations in the BM Unit's BMCAIC. The Proposer considers that many BSC Parties have a significantly lower maximum demand over a non-Working Day compared to a Working Day. The current arrangements can result in an unnecessary increase in the level of Credit Cover required. The Proposer seeks to address this inefficiency by improving the accuracy of the CEI for Supplier BM Units across non-Working Days.

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3 Solution

Proposed solution

P326 'Introduction of a non-Working Day adjustment to the Credit Cover Percentage calculation' was raised by Haven Power. It proposes to amend the calculation of a Supplier BM Unit's BMCAIC to include a **Demand Capacity Factor (DCF)** as follows:

- BMCAIC = DC * CALF * DCF

The DCF for a given Supplier BM Unit would be based on the following calculation:

- DCF = Average non-Working Day Metered Volume / Average Working Day Metered Volume

This DCF value would be capped to fall between 0.0000 and 1.0000 at all times.

A DCF value would be calculated for each Supplier BM Unit for each BSC Season based on the Metered Volumes for that BM Unit in the Reference Season (e.g. DCF values for Spring 2017 would be based on Metered Volumes from Spring 2016). If no Reference Season data is available for a BM Unit, it will be given the appropriate default DCF value. There will be one default DCF value per Grid Supply Point (GSP) Group per BSC Season, which will be calculated as the average of all calculated DCF values within that GSP Group for that BSC Season.

The DCF value would only be applied on non-Working Days; on Working Days this value would be set to 1.0000 (i.e. no scaling). This would result in the DCF scaling the BM Unit's BMCAIC value on non-Working Days by the appropriate factor compared to Working Days. There will be a separate calendar of non-Working Days for BM Units in Scotland (GSP Groups _N and _P) to cater for the different public holiday dates compared to in England and Wales.

The existing Holiday CALF provisions would remain unchanged by P326. Any BM Unit that has a Holiday CALF value applied to it will continue to have its DCF value applied on non-Working Days during the Holiday Period.

The calculation of CALF values and the submission of GC/DC values would remain unchanged by this solution.

This solution would only be applied to Supplier BM Units (those BM Units whose BM Unit IDs begin '2_'). All other types of BM Unit will continue to have their BMCAIC calculated as currently. In addition, any Supplier BM Unit that is deemed a SECALF qualifying BM Unit will continue to use the BMCAEC value as outlined in Section 2.

Alternative Modification

The P326 Workgroup has put forward an Alternative Modification. Under this solution, each Supplier BM Unit would have two CALF values:

- a **Working Day CALF (WDCALF)** value to be applied in Settlement Periods that fall on Working Day; and
- a **non-Working Day CALF (NWDCALF)** value to be applied in Settlement Periods that fall on non-Working Day.

These CALF values would be capped to fall between 0.0000 and 1.0000 at all times.

Solution requirements

The full solution requirements can be found in Attachment A.

Attachment A also contains a worked example of the different arrangements discussed in this document.

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Each CALF value would be calculated based on the average Metered Volumes from the relevant sub-set of days in the Reference Season divided by the overall maximum Metered Volume reading (e.g. the WDCALF values for Spring 2017 would been based on the average Metered Volumes from Working Days in Spring 2016):

- WDCALF = Average Working Day Metered Volume / Maximum Overall Metered Volume
- NWDCALF = Average non-Working Day Metered Volume / Maximum Overall Metered Volume

Each Supplier BM Unit's BMCAIC value for a given Settlement Period would be determined using the WDCALF or NWDCALF value based on whether the Settlement Period fell on a Working Day or a non-Working Day. There will be a separate calendar of non-Working Days for BM Units in Scotland (GSP Groups _N and _P) to cater for the different public holiday dates compared to in England and Wales.

The existing Holiday CALF provisions would be amended so that the calculation would be applied separately to the relevant sub-set of days (Working Days and non-Working Days), giving separate Holiday CALF values for each type of day. This arrangement would also be applied to the Embedded Generation methodology to allow two appropriate negative CALF values to be calculated.

The submission of GC/DC values would remain unchanged by this solution.

This solution would only be applied to Supplier BM Units. In addition, any Supplier BM Unit that is deemed a SECALF qualifying BM Unit will continue to use the single SECALF value, as outlined in Section 2, and not the WDCALF and NWDCALF values. However, to reduce the number of separate CALF value fields that would need to be held within central systems, all BM Units will have a WDCALF and a NWDCALF value in place of the existing single CALF value. All non-Supplier BM Units would continue to have a single CALF value calculated as currently, and this single value would be entered as both the WDCALF and NWDCALF value.

Legal text

The proposed changes to the BSC to deliver the P326 Proposed Modification can be found in Attachment B. The proposed changes to the BSC to deliver the P326 Alternative Modification can be found in Attachment C. We have also taken this opportunity to include some housekeeping changes to the impacted Code Sections.

Are there any other alternative solutions?

The Workgroup has considered several potential alternative options for P326, all of which were variants of the two solutions above. However, it concluded that none of these variants would better facilitate the Applicable BSC Objectives compared to the Proposed or Alternative Modifications.

This section summarises the options discussed by the Workgroup. Its full discussions around each area can be found in Section 6.

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How should the DCF value be calculated?

Alongside using the average Metered Volumes from the Reference Season to calculate the DCF values, the Workgroup looked at using the maximum or median Metered Volumes. After assessing the results of the analysis on each method, the Workgroup concluded that using the average Metered Volumes would provide the greatest accuracy, and agreed not to consider the other options further.

Should the solution be optional?

The Workgroup considered whether the P326 arrangements should be optional, allowing the Lead Parties of BM Units to opt their BM Units into or out of the P326 arrangements as they wished. However, the analysis showed that there would be an overall increase in the accuracy of the CAQCE under P326 compared to now, and did not identify any specific type of Supplier among the minority that saw a decrease in accuracy. Members were also concerned that if the solution was optional, participants could continually switch BM Units between the arrangements depending on which resulted in the lesser amount of Credit Cover needing to be lodged at that time. It was concluded that the solution should be mandatory.

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Estimated central implementation costs of P326

Proposed Modification

The central implementation costs for the proposed solution are approximately £157,000. These costs consist of:

- approximately £125,000 in BSC Agent costs to make the necessary changes to the CRA and the ECVAA systems; and
- approximately £32,000 in ELEXON effort in implementing P326.

In addition, there will be on-going effort of approximately five man days (£1,200) per annum for ELEXON to calculate, validate and submit the DCF values for each BSC Season.

Alternative Modification

The central implementation costs for the alternative solution are approximately £153,000. These costs consist of:

- approximately £120,000 in BSC Agent costs to make the necessary changes to the CRA and the ECVAA systems; and
- approximately £33,000 in ELEXON effort in implementing P326.

In addition, there will be on-going effort of approximately five man days (£1,200) per annum for ELEXON to calculate, validate and submit the additional CALF values for each BSC Season.

Indicative industry costs of P326

Participants that provided information on impacts and costs believed that impacts would be generally minor, consisting mainly of changes to internal processes or systems. The costs to make these changes were generally considered to be small, and would be one-off costs.

The full responses received to the Industry Impact Assessment can be found on the P326 page of our website, and the full responses received to the Assessment Procedure Consultation can be found in Attachment D.

Impact on the CRA-I014 data flow

P326 will impact the CRA-I014 sub flow 5 'Registration Report' data flow that reports BM Unit registration data. For this variant of the flow, fields will need to be added or amended to account for the new parameters that P326 would introduce. Any participant that receives and loads these flows may need to amend their systems to account for these changes. No other variant of the CRA-I014 flow is expected to be impacted.

The ECVAA-I014 'Notification Report' data flow is not expected to be impacted by P326. This data flow only reports the relevant Credit Assessment Credited Energy Volume value for each BM Unit for Settlement Period, which is determined by the ECVAA. It does not

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report any of the underlying parameters such as CALF or GC/DC values, and so will not need to report the new parameters that P326 would introduce.

The full details of these flows can be found in the NETA Interface Definition and Design (IDD) Part 1 'Interfaces with BSC Parties and their Agents' document.

P326 impacts

Impact on BSC Parties and Party Agents	
Party/Party Agent	Impact
Suppliers	Minimal internal process or system impacts directly associated with implementation. Consequent impact on Suppliers due to the change in how BMCAIC values are calculated for their Supplier BM Units. This will affect their indebtedness position and potentially the level of Credit Cover that they are required to lodge.

Impact on Transmission Company
None identified

Impact on BSCCo	
Area of ELEXON	Impact
Settlement Operations	Settlement Operations will be required to either calculate DCF values or two separate CALF values (as applicable) for all Supplier BM Units for each BSC Season. This will need to be carried out three months in advance of each BSC Season.

Impact on BSC Systems and process	
BSC System/Process	Impact
CRA	The CRA will be required to receive and load either DCF values or WDCALF and NWDCALF values (as applicable) from ELEXON and calculate different BMCAIC values from these.
ECVAA	The ECVAA will be required to implement the new method for calculating a Supplier BM Unit's CAQCE value as part of the CCP calculations.

Impact on Code	
Code Section	Impact
Section M	Changes will be required to implement P326. *The changes for the Proposed Modification can be found in Attachment B, and the changes for the Alternative Modification can be found in Attachment C*
Section V	
Section X Annex X-1	
Section X Annex X-2	

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Impact on Code Subsidiary Documents	
CSD	Impact
CRA Service Description	Changes are expected to be required to implement P326.
ECVAA Service Description	
CRA User Requirements Specification	
ECVAA User Requirements Specification	
NETA Interface Definition and Design	

Impact on other Configurable Items	
Configurable Item	Impact
CALF Guidance Document	Changes will be required to document any impact on the calculation processes. Under the Proposed Modification, the DCF calculation process will either be captured in this document, or a separate DCF Guidance Document will be created with the same governance applied.

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5 Implementation

Recommended Implementation Date and approach

The Workgroup recommends an Implementation Date of **23 February 2017** (February 2017 Release) for both the Proposed Modification and the Alternative Modification, if either is approved. Either solution would take full effect from the start of the Spring 2017 BSC Season on 1 March 2017.

The P326 Workgroup proposes the following decision processes and implementation approaches depending on whether P326 is progressed as a Self-Governance Modification:

- If P326 **is** progressed as a Self-Governance Modification then the Panel is currently expected to make the final decision at its meeting on 14 April 2016. If this is the case then the Workgroup recommends an Implementation Date for P326 of **23 February 2017** (February 2017 Release).
- If P326 **is not** progressed as a Self-Governance Modification then the Final Modification Report is currently expected to be issued to the Authority for decision by mid-April 2016. If this is the case then the Workgroup recommends an Implementation Date for P326 of **23 February 2017** (February 2017 Release) if the Authority's decision is received on or before 21 July 2016.

These dates apply to both the Proposed Modification and the Alternative Modification.

These dates are based on the lead time for the central system changes, which has been assessed at 30 weeks for the proposed solution and 31 weeks for the alternative solution. The February 2017 Release is the earliest viable Release that P326 can target based on the current progression timetable. All respondents to the Assessment Procedure Consultation confirmed that they could implement P326 in the February 2017 Release if it was approved.

The go-live date for the February 2017 Release is 23 February 2017, which would only be six calendar days before the Spring 2017 BSC Season begins on 1 March 2017. The Workgroup has therefore agreed that DCF values or separate WDCALF and NWDCALF values (as applicable) should not be calculated for these interim six days. Instead, while the system changes would be set live on 23 February 2017, the solution would only take full effect from 1 March 2017. Members believe this would be the most efficient implementation approach for P326.

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Development of the Proposed Modification

What Reference Season data should be used to calculate DCF values?

In their original proposal, the Proposer had put forward that the DCF value should be calculated based on the maximum Working Day and non-Working Day Metered Volumes in the Reference Season. However, there was concern that this approach could expose the calculation to outlying values, for example caused by a one-off spike in consumption that is unrepresentative of the Supplier's normal patterns. This could lead to unrealistic DCF values being calculated. It was suggested that using the average Metered Volumes instead would smooth out any such spikes and should make the DCF values more representative.

One Workgroup member considered whether using the median Metered Volume values would provide a good outcome, and asked for this to be looked into. However, we were unable to produce any analysis for this approach. There is no in-built function for calculating the median of a set of values within the SQL query language, and the volume of raw data involved in the analysis meant a manual workaround was not viable. Given the size of the datasets involved (approximately 30 million records) we believed that the results for the average and median methods would likely be very similar. Noting this and the added complexity that calculating the median value would require, the Workgroup agreed not to consider this option further.

The analysis produced for the Workgroup showed that using the average Metered Volumes from the Reference Season gave a much bigger improvement in accuracy compared to using the maximum Metered Volumes. In some cases, the maximum Metered Volumes gave an overall net increase in error, making it worse overall than the current arrangements. Overall, using the average Metered Volumes gave between 5% to 8% reduction in the total error, while the maximum Metered Volumes gave between 3% increase to 4% reduction in the total error. The full results can be found in Attachment A.

Noting this, the Proposer and the Workgroup agreed that the DCF values should be calculated based on the average Metered Volumes from the Reference Season.

Should the DCF values be capped?

The Workgroup investigated whether the DCF value should be capped to fall between 0.0000 and 1.0000, or whether values outside of this range should be allowed. The principle behind P326 is that the DCF should account for any reduction in a Supplier's demand on non-Working Days compared to Working Days, which would equate to a DCF value within the range 0.0000 to 1.0000.

A value of greater than 1.0000 would indicate that the Supplier BM Unit had a greater Metered Volume (be it generation or consumption) on non-Working Days compared to Working Days. One example of this would be a portfolio of mostly domestic customers who are out at work during the week, giving low levels of consumption during the day, but are at home during the weekend, increasing consumption accordingly. A negative DCF value would indicate that the BM Unit changes from net consumption on Working Days to net generation on non-Working Days or vice versa. One example of this would be a portfolio containing both domestic consumption and embedded generation. During the week, the level of embedded generation exceeds the domestic consumption, but at weekends this consumption increases, exceeding the level of embedded generation. The Workgroup queried if these scenarios should be included under P326.

Workgroup's detailed analysis

The detailed analysis produced for the P326 Workgroup can be found in Attachment A.

The key findings are noted at the relevant points within this section.

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The analysis carried out for the Workgroup examined each DCF calculation method with the DCF values either capped or uncapped. For both the average Metered Volumes and the maximum Metered Volumes approaches, capping the DCF values produced a greater improvement in the accuracy than if the values were not capped. In the case of using maximum Metered Volumes, P326 would actually make the total volume of error worse if left uncapped, due to a small number of DCF values being significantly outside the proposed cap range. The full results can be found in Attachment A.

The Workgroup also noted that there were several BM Units with DCF values significantly outside the range of 0.0000 to 1.0000, with the most extreme values across the analysis period being 287.3333 down to -35.5000. Members agreed that these extreme values would be unrepresentative of the relevant BM Units' performances. They therefore believed the most prudent solution would be to cap the DCF value to between 0.0000 and 1.0000, to prevent these outlying values having an adverse impact on the BM Unit's estimated performance.

After reviewing these results, the Proposer and the Workgroup agreed that the DCF value should be capped to fall between 0.0000 and 1.0000.

What should the generic DCF value be?

The Workgroup noted that some BM Units will not have any Reference Season data from which a DCF value can be calculated, either because they had not been registered or they had not recorded any activity. For these BM Units, a generic DCF value would be calculated and applied.

Under the current CALF calculation process, any Supplier BM Unit with no Reference Season data is allocated a generic CALF value. There is one generic CALF value per GSP Group. Each of these is calculated as the average of the calculated CALF values across all the Supplier BM Units in that GSP Group.

The Workgroup agreed that the same process should be used to calculate a generic DCF value for each GSP Group. Therefore, each GSP Group will have one generic DCF value, which will be defined as the average of the calculated DCF values across all the Supplier BM Units in that GSP Group. These generic values would be calculated as part of the calculation of DCF values three months before the relevant BSC Season begins.

Will DCF values accurately represent Working Days?

One Workgroup member was concerned that, while applying a DCF value would better represent non-Working Day Metered Volumes, it may leave inaccuracies with the approximation of Working Day Metered Volumes unaddressed. The current single CALF value is based on the average of all Metered Volume readings across the Reference Season, which covers both Working Days and non-Working Days. This would mean that CALF values applied to Working Days would arguably be lower than they should be as the Metered Volumes from non-Working Days in the Reference Season (which may be lower) would be included in the calculation.

The application of a DCF value to better represent non-Working Day Metered Volumes will not affect the representation of Working Day Metered Volumes in the calculations. As the DCF will be set to 1.0000 for Working Days, the calculation would remain as under the current arrangements. The member was concerned that this may result in Working Days being under-securitised, for example if the overall level of securitisation is appropriate and

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there is a reduction in non-Working Day securitisation (due to the increased accuracy) without a commensurate increase in Working Day securitisation. They felt that the estimate for Working Days may also need to be adjusted to ensure the Metered Volumes for these days weren't being underestimated.

To examine this, we re-ran the analysis for the Proposed Modification but replacing the CALF values with the corresponding WDCALF values that would have been calculated and produced under the Alternative Modification. This demonstrates whether a Working Day adjustment should be made to the CALF calculation to account for the 'raw' CALF values only applying to Working Days.

The results indicated that the overall increase in accuracy would be less than under the Proposed Modification, at around a 4% reduction in the total error, compared with 5% to 8% under the Proposed Modification (see above). However, this would be around the same improvement in accuracy seen under the separate WD/NWD CALF values scenarios which would produce a 3% to 5% reduction in total error (see below). In essence, this option is a variant on the WD/NWD CALF values solution, only with a DCF value being applied instead of having a separate NWDCALF value. The full results can be found in Attachment A.

The Workgroup agreed that no amendments to the calculation of CALF values should be made under the Proposed Modification.

Development of the Alternative Modification

Should there be separate Working Day and non-Working Day CALF values?

An alternative solution was put forward where two separate CALF values would be calculated for each Supplier BM Unit for each Season. One value would be calculated based on the BM Unit's average Metered Volumes over Working Days during the Reference Season, and the other would be based on the average Metered Volumes over non-Working Days. In each case, this would be divided by the single maximum Metered Volume value across the Reference Season to calculate the CALF value. All other existing rules regarding calculating a CALF value for Supplier BM Units, including capping values between 0.0000 and 1.0000 and applying default values, would apply to WDCALF and NWDCALF values too. This would provide a Working Day ratio and a non-Working Day ratio compared to the single maximum demand value, which could then be applied against the single DC value in the live Season. Under this solution, there would be no need for a DCF value.

Workgroup members felt that this should be a more accurate solution, as the CALF values would be based only on the relevant sub-set of data (Working Day or non-Working Day). Under the DCF values solution, the CALF value is still based on Metered Volumes from both Working Days and non-Working Days. This could result in the CALF value being too low for Working Days due to the inclusion of non-Working Day data. This would have a corresponding impact on the Credit Assessment Credited Energy Volume.

A majority of respondents to the Industry Impact Assessment also felt that this solution would be the better solution. They agreed with the Workgroup's feeling that this solution should be more accurate, and also felt it looked simpler. However, two respondents felt that the DCF values solution would be preferable as they thought it would be the simpler solution.

The analysis results showed that the WD/NWD CALF solution would provide an overall increase in the accuracy. However, this initial analysis showed these improvements were

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less than those seen for the DCF values solution using the average Metered Volumes, showing between around a 3% to 5% reduction in the total error. The full analysis can be found in Attachment A.

The Workgroup was surprised by the results of this historic analysis, but believed that if the DCF values solution would show the greater improvement in accuracy then that option should be progressed. However, members were keen to understand why the DCF values solution appears to provide greater accuracy than the WD/NWD CALF values solution. It considered whether over-estimation of the DC values submitted by Suppliers could be influencing the relative benefits of the different approaches, and the results of this investigation can be found further on in this section.

Should there also be Working Day and non-Working Day GC/DC values?

One Workgroup member highlighted a proposal from the Industry Impact Assessment whereby, in addition to Working Day and non-Working Day CALF values, there should also be Working Day and non-Working Day GC/DC values. This would further improve the accuracy by requiring participants to submit separate expected maximum demand levels for the two types of day. They considered that having separate CALF values would be more accurate than using a DCF value and that also having separate GC/DC values would provide greater improvements still.

Other Workgroup members disagreed with this approach. One member noted that the CALF values represent the Supplier's average demand as a ratio of the expected maximum demand. As long as the Working Day and non-Working Day CALF values are based on the single maximum demand value, as had been proposed, then there would be no issue with only separating the CALF values. With a Working Day/non-Working Day distinction (via separate WD/NWD CALF values), requiring participants to submit two sets of GC/DC values per BM Unit per BSC Season would add additional complexity into the arrangements for no additional benefit. The Workgroup therefore elected not to progress this proposal any further.

Are DC values too high?

The Workgroup wondered if the reason for the WD/NWD CALF values solution appearing to be less beneficial than the DCF values solution was due to Suppliers over-estimating their DC values for their Supplier BM Units. One member queried whether Supplier BM Units' DC values being too high may be skewing the results of the P326 analysis. Another member noted that it would be to Suppliers' disadvantage to significantly over-estimate their DC values, as this would result in making them look to have consumed more, leaving their estimated position shorter. They felt that it would be good to gain confidence that the results of the analysis were based on correctly calibrated data, and that any potential over-estimation of DC values weren't having an adverse impact on the outcomes. The Workgroup sought the analysis to be re-run with each BM Unit's DC value replaced with the actual maximum demand it recorded during the relevant BSC Season, to simulate an accurate submission of GC/DC values.

To examine this, we re-ran the analysis for the current arrangements and both the Proposed and Alternative Modifications but replacing the DC values submitted by Lead Parties with the maximum actual demand recorded by the relevant BM Unit across the live BSC Season. This would simulate the potential improvements in accuracy that could be realised if Lead Parties were able to submit absolutely accurate DC values each Season.

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The analysis indicated that a potential 12% reduction in the total error could be realised solely from the submission of more accurate DC values. Applying either of the proposed solutions on top of this realises further improvements still. Notably, under this analysis, the WD/NWD CALF values solution appeared to provide a greater improvement in accuracy (around 17%) than the DCF values solution (around 15%). The full results can be found in Attachment A.

However, these are the theoretical maximum improvements that could be realised under each solution, as it assumes the Lead Party submitted the exact value of maximum demand before the Season begins. In reality, the level of improvement would be somewhere below these values, depending on how accurate Suppliers' forecasts are. Nevertheless, this suggests that Suppliers are submitting too-high DC values, and could realise a potentially large improvement in the accuracy of their Credit Assessment Credited Energy Volumes simply by providing more accurate DC values for their BM Units.

In addition, we highlight that, to realise these improvements, participants would need to actively review and re-submit their DC values each Season. As such, while this could realise great benefits for the accuracy of the Credit Assessment Credited Energy Volume estimates, it cannot be assumed that this will happen when assessing the impacts of P326. Therefore, the results from the other pieces of analysis should be taken as better estimates of the scale of the benefits P326 is likely to realise.

Conclusion

Several Workgroup members felt that the WD/NWD CALF values solution should be the more accurate of the two solutions. They believed that this solution had the greater potential for improving the accuracy of the BM Unit Credit Assessment Import Capacity estimates. While the DCF values solution would deliver the greater improvement in accuracy with the current level of accuracy for DC values, it was thought that the WD/NWD CALF values solution would offer Suppliers a greater incentive to review their DC submissions ahead of each BSC Season and submit the most accurate values that they were able to. Members also noted that this solution did give an improvement in accuracy in itself which is of a comparable magnitude to the improvement demonstrated under the DCF values solution.

Having considered this, the Workgroup believed that the WD/NWD CALF values solution should be raised as the P326 Alternative Modification.

How would P326 interact with the Holiday CALF process?

The Holiday CALF provisions were introduced to allow Suppliers to request a reduced CALF value over the two main holiday periods, to reflect the extended period of reduced demand that some of their customers experience during these times. Workgroup members asked how P326 would interact with this process and whether it would remove the need for Holiday CALF values.

One member highlighted that the Holiday CALF value is applied to all days within the holiday period, both Working Days and non-Working Days. This was agreed at the time the provisions were introduced, as the impacted Suppliers tended to see reduced demand across all days (Working Days as well as non-Working Days) during the holiday period, for example due to businesses closing for the whole Christmas and New Year Period rather than just for the non-Working Days. They therefore felt that the provisions should be kept.

Declaration of GC/DC values

The Lead Parties of all BM Units are required to submit GC and DC values for each of their BM Units before the start of each BSC Season. If they do not, the values in force on the last day of the previous Season are carried over.

Once the Season begins, Parties can only re-declare their GC/DC values mid-Season to a value higher in magnitude than before. Furthermore, they must re-declare a value if their BM Unit breaches the previously declared value.

However, the DC values for Supplier BM Units can be re-declared downwards in magnitude up to twice per BM Unit per Season, if the Supplier believes this lower value would be a more accurate value for the remainder of the Season.

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DCF values and Holiday CALF

The Workgroup considered that applying both the Holiday CALF process and a DCF value would result in consumption on non-Working Days being reduced twice. It therefore initially thought that for any BM Unit that has a Holiday CALF value calculated for it, the DCF should be set to 1.0000 for the duration of the holiday period. The Holiday CALF value would account for the reduced consumption experienced by the Supplier across both Working Days and non-Working Days. There is therefore no need to further apply a DCF value during this time. A DCF value would still be calculated and applied for Settlement Days outside of the holiday period.

However, analysis on the holiday periods that fell during the analysis period suggested that it may be appropriate to apply the DCF value on top of a Holiday CALF value. In particular, across all the impacted BM Units, the Metered Volumes recorded continued to show reductions during non-Working Days in the holiday periods compared to Working Days, which the application of the DCF value better matched. The full analysis can be found in Attachment A.

Members considered that the choice would come down to a trade-off between complexity and accuracy, but noted that there would be no cost difference between them. The Workgroup selected the more accurate option, but noted that the governance for this would be documented within the CALF Guidance Document. This would mean that the Imbalance Settlement Group (ISG) could re-examine this area at a later date if it wished. The Workgroup therefore agreed that the DCF value should continue to be applied to a BM Unit when a Holiday CALF value is in place.

CALF Guidance Document governance

Much of the detail regarding the calculation and application of CALF values is contained within the CALF Guidance Document established under BSC Section M1.5.1. This includes the provisions around calculating Holiday CALF values. The Panel has delegated responsibility for this document to the ISG.

This document does not sit on the BSC Baseline Statement, and so changes to it can be approved by the ISG without the need for a Modification or Change Proposal (CP).

WD/NWD CALF values and Holiday CALF

The Workgroup believed that the Holiday CALF provisions should also continue to be applied under the WD/NWD CALF values solution. A solution was proposed where the existing Holiday CALF calculations are left unchanged from now, but are applied separately to the separate sub-sets of days (Working Day or non-Working Day). This will result in separate Working Day and non-Working Day Holiday CALF and outside-Holiday CALF values for each relevant BM Unit.

One Workgroup member believed that this approach sounded good in theory, and would seem to require little extra work compared with the current arrangements. Other members agreed, and noted that, as with the Proposed Modification, the ISG could revisit this aspect of the solution at a later date if a better solution was identified. The Workgroup therefore agreed that this approach should be put forward for Holiday CALF values under the WD/NWD CALF values solution.

Should the solution be mandatory or optional?

The Workgroup looked into whether a particular type of Supplier was at risk of being consistently disadvantaged by P326, and whether there could there be any systematic bias. To counter this potential risk, it initially considered whether the P326 solution should be optional, with BM Units able to be opted in to or out of the arrangements. That way, any Suppliers whose accuracy would be decreased by the P326 arrangements could opt to stick with the current arrangements.

The Workgroup considered how an opt-in process would work for P326. Opting in or out would apply on a Settlement Day basis. The Lead Party would be able to notify the CRA

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that it wanted to opt one of its Supplier BM Units into or out of the P326 arrangements and the Settlement Day from which this change would take effect. This status would then remain in place until the Lead Party stated otherwise. There would be a flag within the CRA's systems to denote whether each BM Unit was opted in or out. It should be noted that the same DCF value, calculated three months prior to the Season beginning, would be applied to a BM Unit throughout a BSC Season; this would not be recalculated every time the BM Unit opted in. Opting in or out would only determine whether or not this value would then be applied. Equally, under the WD/NWD CALF values solution, each BM Unit would have a single CALF value and separate WDCALF and NWDCALF values calculated prior to the Season, and the flag would only determine which value(s) would then be applied.

Some Workgroup members were concerned that this would place additional administrative burdens on Suppliers and the CRA. Suppliers would need to determine whether they should be opted in or out of the arrangements and notify the CRA of this, who would then update its systems accordingly.

The Workgroup asked whether, if the solution was optional, BM Units should be automatically opted in to or out of P326 upon implementation unless the Lead Party stated otherwise. Members generally felt that, if the majority of Parties would see an increase in accuracy from P326 then it would be sensible to automatically opt all BM Units in. It would then be up to Suppliers to opt their BM Units out if they believed that P326 would worsen their accuracy. However, it decided to seek views on this in the Industry Impact Assessment before making a decision.

The views of respondents were mixed, with an equal split between the two options. Those respondents that believed BM Units should be opted-in by default agreed with the Workgroup's views. However, the other respondents noted concerns that if all BM Units were automatically opted in to the P326 arrangements there was the risk that a Supplier that would see a notable decrease in accuracy could fail to opt out and dis-benefit as a result. They felt it would be better for the status quo to prevail and to require Suppliers to opt-in to the P326 arrangements if they so wished. The full responses can be found on the P326 page of our website.

The analysis carried out for the Workgroup showed that, while there was an overall increase in accuracy from applying a DCF value, a small number of BM Units would see an increased level of inaccuracy. However, it did not appear that there was a particular type of Supplier that experienced this greater inaccuracy. The WD/NWD CALF values solution also showed an overall increase in accuracy, but there were some types of Suppliers that saw an average worsening in accuracy. However, this was often caused by a significant outlier within that Supplier group skewing the average, and no group showed a persistent decrease in accuracy across all the Suppliers within it. The full results of this analysis can be found in Attachment A.

One Assessment Procedure Consultation respondent noted that Suppliers with BM Units with negative CALF values would be required to lodge more Credit Cover under P326 (see below for the discussion on this point). The respondent believed that this could be resolved by making the solution optional.

Noting this comment, a Workgroup member believed that the level of embedded generation is expected to increase in the future, meaning more BM Units would experience this effect. They therefore agreed with the respondent that the solution should be made optional, considering that this would also futureproof the change against future increases in embedded generation.

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However, another Workgroup member was concerned that an optional approach could result in BM Units being continually switched between the two sets of arrangements, depending on which required the relevant Party to lodge the least amount of Credit Cover at any given time. They did not believe this should be allowed. They believed that, as the analysis suggested that P326 would realise an overall increase in accuracy and there did not appear to be any bias against a particular type of Supplier on this area then P326 should be made mandatory. Other members agreed with this. They also noted that an optional solution would increase the cost and complexity of P326, as it would mean central systems would need to maintain two parallel systems and Suppliers would need to understand both. They felt that the potential dis-benefits for individual Suppliers arising from P326 did not seem large enough to warrant this, especially given the overall improvement in accuracy that this change would have.

The Proposer and the Workgroup therefore agreed that both the Proposed Modification and the Alternative Modification should be mandatory.

Should there be a separate Working Day calendar for Scotland?

Scotland has a different set of public holiday dates to England and Wales, and there are five days each calendar year where one part of the country is on a public holiday while the other is not. These five dates are:

- Scotland has a bank holiday on 2 January, while England and Wales do not.
- Scotland does not have a bank holiday on Easter Monday, while England and Wales do.
- The Summer bank holiday is on the first Monday in August in Scotland, but is on the last Monday in August in England and Wales.
- Scotland has a bank holiday for St. Andrew's Day on 30 November, while England and Wales do not.

The Workgroup considered that the intent of P326 was to account for differences in consumption between Working Days and non-Working Days. The default position would be to use the England and Wales calendar across all BM Units. However, this may cause errors for those BM Units in Scottish GSP Groups (GSP Groups _N and _P), due to being treated as Working Day when their customers may be observing a public holiday or vice versa. Members were concerned that this may cause geographical discrimination for Suppliers operating predominantly in Scotland, and considered whether a separate Scottish non-Working Day calendar should be introduced for use under P326. They believed that it would be right in principle to treat Scottish public holidays separately.

One member highlighted that profiling information, which highlights the difference between consumption patterns on a Working Day and a non-Working Day, supports the argument for introducing the separate calendar. They also noted that the separate Scottish calendar is currently accounted for within the profiling processes, to cater for this distinction.

Another member considered whether it would be easier just to treat Saturdays and Sundays as non-Working Days, and ignore the public holidays, as this would be simpler. However, it was highlighted that the aim of the Credit Assessment Credited Energy Volume calculation is to produce a proxy for the Credited Assessment Volume, and this proxy should be made as accurate as it can be. Given that the profiling data shows a distinct

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difference between a Working Day and a non-Working Day, public holidays should be accounted for.

The analysis assessed the impact of using the separate Scottish calendar instead of using the English and Welsh calendar for BM Units in the Scottish GSP Groups for the Proposed Modification. It concluded that the additional improvement in accuracy across the relevant five dates of the year would equate to around a further 5% reduction in the error across those specific dates. No specific analysis on this area was carried out for the Alternative Modification. The analysis behind this can be found in Attachment A.

Noting all this, the Proposer and the Workgroup have elected to account for the separate Scottish calendar in both P326 solutions.

What is the impact on Credit Cover?

The Workgroup considered what impact P326 would have on the levels of Credit Cover that Parties would need to lodge. However, while it was able to consider the overall impact at a high level, it was unable to determine the impact for individual Parties, and believed it was for them to assess how P326 may affect them individually.

The analysis that was undertaken for P326 focused on the accuracy of the Credit Assessment Credited Energy Volume against the corresponding Credited Energy Volume for each Settlement Period, with the former acting as a proxy value for the latter prior to the Interim Information (II) Settlement Run. While it can show whether the new methodology has a 'shortening' or 'lengthening' effect in principle for each BM Unit, it does not consider contract volumes or Parties' indebtedness. Therefore, we cannot determine how this effect actually impacts on credit requirements at a detailed level.

Nevertheless, a high-level view on the impacts on Credit Cover can be shown. Under the DCF values solution, the DCF value would only ever be between 0.0000 and 1.0000 inclusive, meaning that the Credit Assessment Credited Energy Volume would be reduced such that the relevant BM Unit would be estimated to have consumed less than under the current arrangements. This would mean the Supplier's estimated position would be longer than currently, requiring less Credit Cover to be lodged. However, this effect could manifest as either:

- a reduction in the over-estimate of the BM Unit's consumption (increased accuracy under the analysis); or
- an increase in the under-estimate of the BM Unit's consumption (reduced accuracy under the analysis).

However, one respondent to the Assessment Consultation flagged that Suppliers with BM Units that have requested a negative CALF value would see the opposite effect. For these BM Units, the Credit Assessment Credited Energy Volume would be positive, denoting generation. The DCF value would then reduce this estimated generation, meaning the BM Unit will look like it had generated less than under the current arrangements. This would mean the Supplier's estimated position would be shorter than currently, potentially requiring more Credit Cover to be lodged. Again, this could manifest as either:

- a reduction in the over-estimate of the BM Unit's generation (increased accuracy under the analysis); or
- an increase in the under-estimate of the BM Unit's generation (reduced accuracy under the analysis).

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The respondent believed this would discriminate against Suppliers with negative CALF values.

Under the WD/NWD CALF values solution, each CALF value would be calculated independently of the other. It is therefore possible for the NWDCALF value to be either higher or lower than the WDCALF value, depending on whether the average Metered Volume across non-Working Days from the Reference Season was higher or lower than that for Working Days. This will have a corresponding effect on the level of Credit Cover required.

The Workgroup noted these effects, but believed that the aim of P326 is to improve the accuracy of the Credit Assessment Credited Energy Volume values. This would better enable the correct level of Credit Cover to be assessed, even if in some cases this requires more money to be lodged than currently.

One Workgroup member suggested a method for assessing a rough estimate of the financial benefits of P326. In 2014 the Proposed Modification was estimated to have potentially reduced the level of inaccuracy by about 5TWh across all Suppliers across the whole year, with the Alternative Modification reducing the inaccuracy by around 2TWh. Multiplying each of these by the Credit Assessment Price (CAP), which has been around the £40/MWh mark in recent months, gives total savings of approximately £200m for the Proposed Modification and £80m for the Alternative Modification. Assuming the cost of a letter of credit is approximately 1% (depending on the size of the company), this results in savings of approximately £2m per annum for the Proposed Modification and £800,000 per annum for the Alternative Modification. These values could be increased further if Suppliers submit more accurate DC values. Therefore, over time, the member believed these savings would outweigh the one-off central implementation costs of approximately £150,000.

Should P326 be extended to include other BM Units?

One respondent to the Industry Impact Assessment queried why P326 was limited only to Supplier BM Units. They considered that the patterns for the larger consumers connected directly to the Transmission System could also vary between Working Days and non-Working Days. They expressed concerns that limiting the solution would be discriminatory between Suppliers and other types of Party.

They also considered whether it could be expanded to include exporting BM Units, as the pattern of generation should align with the pattern of demand. While they note that such generation units are typically Credit Qualifying and so would not use CALF values anyway, they considered that it was not clear why P326 was limited only to the import capacity for Supplier BM Units.

The Proposer noted that they had raised the Modification to focus on Supplier BM Units from the beginning, but was open to extending the scope if it was shown this would be beneficial. One member agreed that limiting the solution only to Supplier BM Units could be considered discriminatory, but noted that it had to be determined whether this would be due or undue discrimination. They asked the counter-question of why other BM Units *should* be included under P326. They felt that it was unlikely that large demand sites would show the variance that P326 is seeking to resolve. While the solution could be extended in principle, the member wanted to understand the concerns and rationale for doing so. Other members agreed with this.

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Another member noted that no analysis had been done for other types of BM Unit, so believed it would be better to limit P326 to Supplier BM Units and allow the ISG to investigate the case for expansion later on. The Workgroup noted that the majority of Assessment Procedure Consultation respondents agreed that P326 should not be extended, and that any extension should be considered separately, e.g. under a subsequent Modification.

We note that the technical solution for the DCF values option would allow it to be applied to the import capacity of all BM Units at a later date without further system changes, although changes would be required if the solution was to be expanded to apply to the export capacity as well. The system changes for the WD/NWD CALF values option would be completely futureproofed against the solution being expanded at a later date. We also note that, once P326 has been implemented, an extension of the solution would only require corresponding updates to the CALF Guidance Document. This would mean that the ISG could choose to extend the solution at a later date without the need for a Modification or Change Proposal (CP).

The Workgroup therefore elected to keep P326 limited to Supplier BM Units, but noted that the ISG would be able to revisit this at a later date, and could choose to extend the solution without the need for a further Modification.

Should CALF values be calculated more frequently?

The Workgroup noted a suggestion in the Industry Impact Assessment that the Credit Assessment Credited Energy Volume could be made more accurate if CALF values were calculated on a more frequent basis. The respondent suggested that monthly or even weekly would offer benefits, meaning CALF values would be based on the Metered Volumes from the equivalent month or week from the previous year. This would allow any variations between months to be better captured in the estimate.

One member highlighted that a greater frequency may complicate the appeals process. Values are currently published three months ahead of the BSC Season to allow time for a BSC Party to appeal those calculated for its BM Units. If this timescale was shortened then the appeals process could overlap with the BSC Season itself or even result in appeal backlogs.

The Workgroup was keen to explore this idea. They agreed that this sounded like it would deliver greater accuracy than the current seasonal values. However, the Workgroup noted that this change was out of scope of P326, which had been raised to account for differences between Working Day and non-Working Day consumption. Therefore, a separate Modification would need to be raised to progress this. Nevertheless, members still believed that this warrants further investigation, and encouraged further exploration.

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7 Workgroup's Conclusions

Workgroup's final recommendations

The Workgroup unanimously recommends that both the P326 Proposed Modification and the P326 Alternative Modification would better facilitate Applicable BSC Objective (c). By majority (five to one), the Workgroup believes the Alternative Modification would better facilitate the Applicable BSC Objectives than the Proposed Modification.

The Workgroup therefore recommends that the **P326 Alternative Modification should be approved**.

Workgroup members' views against the Applicable BSC Objectives

Applicable BSC Objective (c) – both solutions

All Workgroup members believe that both solutions would better facilitate Applicable BSC Objective (c), for the same reasons in each case. Members consider that improving the accuracy of the Credit Assessment Credited Energy Volume estimate would result in more accurate levels of Credit Cover being lodged. This would improve competition. In many cases, this is expected to result in a reduction in the amount of Credit Cover required, resulting in savings that can be passed on to consumers.

Applicable BSC Objective (d) – both solutions

One member felt there was a minor detrimental impact against Applicable BSC Objective (d), due to the additional work required to calculate and submit the DCF values. However, they believed the benefits under Applicable BSC Objective (c) outweighed this dis-benefit, so were happy to approve the Modification overall. This view applied to both solutions.

The rest of the Workgroup believed P326 had no impact on Applicable BSC Objective (d). One member noted that there will always be some central costs incurred in making these sorts of improvements to processes.

The Alternative Modification compared to the Proposed Modification

Five Workgroup members believed that the Alternative Modification better facilitated the Applicable BSC Objectives compared to the Proposed Modification. These members believed that, while both solutions were an improvement over the current baseline, the Alternative Modification presented Suppliers with more opportunities to change their behaviours in order to realise benefits. This would better facilitate Applicable BSC Objective (c).

The remaining Workgroup member (the Proposer) believed that the Proposed Modification better facilitated the Applicable BSC Objectives compared to the Alternative Modification. They considered that, while both solutions were neutral overall against Applicable BSC Objective (d), the Proposed Modification would be simpler to administer, and so would be more efficient than the Alternative Modification.

What are the Applicable BSC Objectives?

(a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence

(b) The efficient, economic and co-ordinated operation of the National Electricity 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 of the balancing and settlement arrangements

(e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency [for the Co-operation of Energy Regulators]

(f) Implementing and administrating the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation

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Participants' views against the Applicable BSC Objectives

When the Assessment Procedure Consultation was issued, the Workgroup had not formally raised the Alternative Modification. Respondents were therefore only asked for their views against the Applicable BSC Objectives for the Proposed Modification. However, full details of the Alternative Modification were included in the consultation, and respondents were specifically asked whether they would support this option were it to be progressed. You can find the full responses received in Attachment D.

Views in support of the Proposed Modification

Eight of the ten respondents believed that the Proposed Modification would better facilitate Applicable BSC Objective (c). No views were expressed against any of the other Applicable BSC Objectives.

These respondents generally agreed that P326 would improve the accuracy of the Credit Cover calculations and so would help to reduce the unnecessarily high levels of Credit Cover that Suppliers are currently required to lodge.

Views against the Proposed Modification

Two respondents believed that the Proposed Modification would not better facilitate the Applicable BSC Objectives, focusing on Applicable BSC Objectives (c) and (d).

One respondent believed the results showed that the overall improvements in accuracy were less marked for independent and renewable Suppliers compared to vertically integrated Parties, which would not facilitate competition. Furthermore, they believed the solution disadvantaged Suppliers with a negative CALF value, requiring them to lodge more Credit Cover as a result. They believed that this could be overcome if the solution were made optional, but overall believed the solution detrimental to Applicable BSC Objective (c). They also believed the costs of P326 would outweigh the benefits, and so would be detrimental to Applicable BSC Objective (d).

The other respondent that disagreed with P326 believed it would discriminate between Suppliers and other types of Party that may experience a variance in demand between Working Days and non-Working Days. They were also concerned that errors from other sources, such as inaccurate DC values, could be being confused with errors arising from any variance in demand between the different day types. They believed this would be detrimental to Applicable BSC Objective (c), but considered that extending the solution to include all BM Units would resolve this. They were also concerned whether the costs would outweigh the benefits, so considered that P326 may be detrimental to Applicable BSC Objective (d).

Views on the Alternative Modification

All ten respondents stated that they would support the Alternative Modification if it was shown to be more accurate than the Proposed Modification, although a couple of respondents noted that this was dependent on certain criteria being met. Several respondents felt that this solution had a sound theoretical basis and believed that introducing two separate CALF values should be more accurate than applying a DCF multiplier to the existing 'flat' CALF value. One respondent also felt that the Alternative

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Modification should improve accuracy in a more rational, non-discriminatory manner than applying a DCF value.

One respondent felt they could only support the Alternative Modification if it was shown to not benefit vertically integrated Parties more than independent or renewable Suppliers, and if it did not produce a systematic bias against Suppliers with negative CALF values. Another was keen to await the outcome of the Workgroup's investigation on whether inaccurate DC values were affecting the results of the analysis.

Views on Self-Governance

By majority, the Workgroup believes that P326 would not meet the Self-Governance Criteria and so should be submitted to the Authority for decision.

Four Workgroup members consider that the criteria would not be met. These members believe that P326 would discriminate between different classes of Party as P326 would apply only to Suppliers (Criterion (b)). This could also be considered a material impact on competition (Criterion (a)(ii)) for the same reason. One member noted that while there is an overall benefit under P326, there is a distributional effect. These members believe P326 should be submitted to the Authority for decision.

The remaining two members believe that P326 would meet the Self Governance Criteria, considering that it is unlikely to have a material impact on any of the areas listed under the criteria. They highlight that P310 'Revised Credit Cover for Exporting Supplier BM Units' also amended how Suppliers' Credit Cover is calculated and was deemed a Self-Governance Modification. They also note that Ofgem, in its initial proposals under the Code Governance Review Phase 3, considers that Modifications should be progressed as Self-Governance unless it can be demonstrated why an individual change would require an Authority decision.

Six of the ten respondents to the Assessment Procedure Consultation agree with the views that P326 should be treated as Self-Governance, while three believed that it shouldn't (the remaining respondent was neutral). The views expressed were broadly in line with those of the Workgroup, and can be found in Attachment D.

What are the Self-Governance Criteria?

A Modification that, if implemented:

(a) is unlikely to have a material effect on:
(i) existing or future electricity consumers; and
(ii) competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution, or supply of electricity; and
(iii) the operation of the national electricity transmission system; and
(iv) matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies; and
(v) the Code's governance procedures or modification procedures; and

(b) is unlikely to discriminate between different classes of Parties.

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Panel's considerations on P326

One Panel Member queried the Workgroup's view that P326 could be seen as discriminating and sought more information. We noted that the reference related in particular to large directly connected demand sites which may also exhibit changes in consumption patterns on non-Working Days. The Workgroup had noted concerns that Parties that could benefit from P326 had been excluded.

The Authority Representative queried whether this would qualify as a material impact on competition. One Panel Member noted this seemed a case when a certain type of site could benefit from the solution but had been excluded, but felt a targeted Modification could be raised to extend the solution accordingly. They therefore felt this didn't seem like a form of discrimination that would fall under the Self-Governance Criteria. The Authority Representative agreed, believing the Self-Governance Criteria to be more about whether one type of participant was unduly advantaged or disadvantaged by the change. They believed P326 would meet the spirit of the Self-Governance Criteria in this regard.

The Panel asked why the Alternative Modification had been preferred by the Workgroup when the Proposed Modification appeared to deliver the greater improvement in accuracy. We noted that this was as a result of the further analysis carried out assuming more accurate DC values. It was this greater potential improvement in accuracy along with the potential for the alternative solution to be less discriminatory that the proposed solution that resulted in the Workgroup's final recommendation.

One Panel Member asked whether the Workgroup had assessed how likely it was Suppliers would submit more accurate DC values in response to this Modification. We noted that it had not, but highlighted that this would be very difficult to assess, with the only viable option being to ask Suppliers directly. The Panel would therefore welcome views from Suppliers on the likelihood that they would seek to submit more accurate DC values in response to P326.

Panel's initial recommendations

Applicable BSC Objectives

The Panel unanimously agreed that both the P326 Proposed Modification and the P326 Alternative Modification **would better facilitate Applicable BSC Objective (c)** for the same reasons given by the Proposer and the Workgroup in Section 7. It also unanimously agreed that the Alternative Modification would be better than the Proposed Modification, again for the same reasons.

The Panel therefore initially unanimously recommended that the **P326 Alternative Modification should be approved**.

Self-Governance

All but one of the Panel Members agreed that P326 would meet the Self-Governance Criteria. They noted the view of the Authority Representative that P326 did not appear to constitute a material form of discrimination, and that it met the spirit of the Self-Governance Criteria. While P326 may exclude sites such as directly connected demand, they noted the solution could be extended at a later date.

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The Panel Member that believed P326 did not meet the Self-Governance Criteria did so for the same reasons put forward by the Workgroup in Section 7.

The Panel therefore initially recommended that **P326 should be progressed as a Self-Governance Modification**.

Legal text

The Panel unanimously agreed that the draft redlined changes to the BSC in Attachments B and C deliver the intention of the P326 Proposed and Alternative Modifications respectively.

Implementation Date

The Panel unanimously agreed with the recommended Implementation Date of 23 February 2017 as part of the February 2017 Release, as put forward in Section 5.

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9 Report Phase Consultation Responses

This section summarises the responses to the Panel's Report Phase Consultation on its initial recommendations. You can find the full responses in Attachment E.

Summary of P326 Report Phase Consultation Responses				
Question	Yes	No	Neutral/ No Comment	Other
Do you agree with the Panel's initial unanimous recommendation that the **P326 Proposed Modification** better facilitates the Applicable BSC Objectives compared to the **current baseline**?	5	2	0	0
Do you agree with the Panel's initial unanimous recommendation that the **P326 Alternative Modification** better facilitates the Applicable BSC Objectives compared to the **current baseline**?	7	0	0	0
Do you agree with the Panel's initial unanimous recommendation that the **P326 Alternative Modification** better facilitates the Applicable BSC Objectives compared to the **P326 Proposed Modification**?	7	0	0	0
Do you agree with the Panel's initial majority view that P326 should be treated as a Self-Governance Modification?	6	0	0	1
Do you agree with the Panel that the redlined changes to the BSC deliver the intention of the **P326 Proposed Modification**?	5	0	1	1
Do you agree with the Panel that the redlined changes to the BSC deliver the intention of the **P326 Alternative Modification**?	5	0	1	1
Do you agree with the Panel's recommended Implementation Date?	7	0	0	0
Would you seek to submit more accurate DC values for your BM Units in response to P326?	2	2	2	1
Do you have any further comments on P326?	2	5	0	0

Respondents' views on the solutions

Five of the seven respondents agreed that the Proposed Modification better facilitated the Applicable BSC Objectives compared to the current baseline. The reasons provided were broadly in agreement with those of the Panel, and no new arguments were raised.

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The remaining two respondents felt the Proposed Modification would not be better than the current baseline. One believed that this solution would disadvantage Suppliers that request negative CALF values. The other respondent felt the application of a DCF value reduces the estimated consumption on non-Working Days without making a corresponding increase to the estimation on Working Days. They believed this would systematically under-estimate participant's consumption on average. They also note that there would be discrimination between those Parties that see different levels of Working Day and non-Working Day variations.

All seven respondents believed that the Alternative Modification better facilitated the Applicable BSC Objectives compared to the current baseline, and that it was also better than the Proposed Modification. The reasons provided by respondents were broadly in line with those of the Panel. Additionally, those respondents who disagreed with the Proposed Modification believed the Alternative Modification resolves the concerns noted above.

Respondents' views on Self-Governance

Five respondents agreed fully with the Panel's view that P326 should be progressed as a Self-Governance Modification. These respondents felt that both solutions would meet the Self-Governance Criteria for the reasons expressed by the Panel.

However, the remaining two respondents felt that only the Alternative Modification should be treated as Self-Governance, and believed that the Proposed Modification did not meet the Criteria. These respondents felt their concerns with the Proposed Modification, as noted above, would create undue discrimination that would fail to meet the Criteria.

Would respondents seek to submit more accurate DC values?

Following the Panel's query, we asked respondents whether they would seek to submit more accurate DC values in response to P326. The views of respondents were mixed. A couple of respondents noted they may review their processes for submitting DC values in response to P326. However several respondents noted that they already endeavour to submit the most accurate DC values, and continually seek to improve the accuracy of their forecasts.

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10 Recommendations

We invite the Panel to:

- **AGREE** that the P326 Proposed Modification:
  - **DOES** better facilitate Applicable BSC Objective (c);
- **AGREE** that the P326 Alternative Modification:
  - **DOES** better facilitate Applicable BSC Objective (c);
- **AGREE** that the P326 Alternative Modification is better than the P326 Proposed Modification;
- **DETERMINE** (in the absence of any Authority direction) that P326 is a Self-Governance Modification Proposal;
- **APPROVE** the P326 Alternative Modification and **REJECT** the P326 Proposed Modification;
- **APPROVE** an Implementation Date of 23 February 2017;
- **APPROVE** the draft legal text for the Proposed Modification;
- **APPROVE** the draft legal text for the Alternative Modification; and
- **APPROVE** the P326 Modification Report.

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Appendix 1: Workgroup Details

Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P326 Terms of Reference
What impact will this Modification have on indebtedness and the overall amount of Credit Cover required?
What impacts does P326 have on different types of participant and is there a comparable benefit across all participant types?
What impact does P326 have on the current CALF processes? • Is there a need for a Working Day CALF and non-Working Day CALF? • Is the Holiday CALF process still required if this Modification is approved?
Should the DCF be calculated on an average value basis opposed to a maximum value basis?
Should the DCF values be capped?
Where there is insufficient historic data in which to calculate a DCF for a BM Unit, should a default of 1 be assigned, and should Parties be able to appeal this, similarly to a CALF appeal?
Should BSC Parties be able to opt in/out?
Should Scottish bank holidays be included?
Does this Modification meet the Self-Governance Criteria?
What changes are needed to BSC documents, systems and processes to support P326 and what are the related costs and lead times?
Are there any Alternative Modifications?
Does P326 facilitate the Applicable BSC Objectives better than the current baseline?

Assessment Procedure timetable

P326 Assessment Timetable	
Event	Date
Panel submits P326 to Assessment Procedure	10 Sep 15
Workgroup Meeting 1	09 Oct 15
Industry Impact Assessment	26 Oct 15 – 20 Nov 15
Workgroup Meeting 2	30 Nov 15
Assessment Procedure Consultation	18 Dec 15 – 22 Jan 16
Workgroup Meeting 3	03 Feb 16
Panel considers Workgroup's Assessment Report	10 Mar 16

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Workgroup membership and attendance

P326 Workgroup Attendance				
Name	Organisation	09 Oct 15	30 Nov 15	03 Feb 16
Members				
Dean Riddell	ELEXON *(Chair)*	✓	✓	✓
David Kemp	ELEXON *(Lead Analyst)*	✓	✓	✓
Karl Maryon	Haven Power *(Proposer)*	✓	✓	✓
Andy Colley	SSE	☎	✓	✓
Gary Henderson	Scottish Power	✓	✓	✓
Paul Bedford	Opus Energy	✓	✓	✓
Mauricio Cepeda	Gazprom	✓	✓	✓
Lin Gao	E.ON	✓	✓	✓
Attendees				
Elliott Hall	ELEXON *(Design Authority)*	✓	✓	✓
Tina Wirth	ELEXON *(Lead Lawyer)*	✓	✓	✗
Carl Whitehouse	First Utility	✓	✓	✗
Gemma Truran	RWE Npower	✗	✓	✓

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Appendix 2: Glossary & References

Acronyms

Acronyms used in this document are listed in the table below.

Acronyms	
Acronym	Definition
AEI	Actual Energy Indebtedness
BM	Balancing Mechanism
BMCAEC	BM Unit Credit Assessment Export Capability *(parameter)*
BMCAIC	BM Unit Credit Assessment Import Capability *(parameter)*
CALF	Credit Assessment Load Factor *(parameter)*
CAP	Credit Assessment Price *(parameter)*
CAQCE	Credit Assessment Credited Energy Volume
CCP	Credit Cover Percentage
CEI	Credit Assessment Energy Indebtedness
CP	Change Proposal
CRA	Central Registration Agent *(BSC Agent)*
DC	Demand Capacity *(parameter)*
DCF	Demand Capacity Factor *(parameter)*
ECVAA	Energy Contract Volume Allocation Agent *(BSC Agent)*
ECVN	Energy Contract Volume Notification *(notification)*
EI	Energy Indebtedness
FPN	Final Physical Notification
GC	Generation Capacity *(parameter)*
GSP	Grid Supply Point
IDD	Interface Definition and Design *(Code Subsidiary Document)*
II	Interim Information *(Settlement Run)*
ISG	Imbalance Settlement Group *(Panel Committee)*
MEI	Metered Energy Indebtedness
MVRN	Metered Volume Reallocation Notification *(notification)*
NWD	non-Working Day
NWDCALF	non-Working Day Credit Assessment Load Factor *(parameter)*
QABC	Account Bilateral Contract volume
SECALF	Supplier Export Credit Assessment Load Factor *(parameter)*
SPD	Settlement Period Duration *(parameter; 0.5 hours)*
WD	Working Day
WDCALF	Working Day Credit Assessment Load Factor *(parameter)*

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External links

A summary of all hyperlinks used in this document are listed in the table below.

All external documents and URL links listed are correct as of the date of this document.

External Links		
Page(s)	Description	URL
4	BSC Sections page on the ELEXON website	https://www.elexon.co.uk/bsc-related-documents/balancing-settlement-code/bsc-sections/
4	Credit page on the ELEXON website	http://www.elexon.co.uk/reference/credit-pricing/credit/
4	Generation and Demand Capacity page on the ELEXON website	https://www.elexon.co.uk/reference/technical-operations/balancing-mechanism-units/generation-and-demand-capacity/
4, 5, 18	Credit Assessment Load Factor page on the ELEXON website	https://www.elexon.co.uk/reference/technical-operations/balancing-mechanism-units/credit-assessment-load-factor/
6, 9, 19	P326 page on the ELEXON website	https://www.elexon.co.uk/mod-proposal/p326/
6, 7	UK Bank Holidays page on the GOV.UK website	https://www.gov.uk/bank-holidays
10	Interface Definition Documents page on the ELEXON website	https://www.elexon.co.uk/bsc-related-documents/related-documents/interface-definition-documents/
26	P310 page on the ELEXON website	https://www.elexon.co.uk/mod-proposal/p310/
26	Code Governance Review (Phase 3): Initial Proposals page on the Ofgem website	https://www.ofgem.gov.uk/publications-and-updates/code-governance-review-phase-3-initial-proposals

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