

# ELEXON

## CREDIT ASSESSMENT LOAD FACTORS (CALF)

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Guidance

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Public

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# Summary

In accordance with [BSC Section M](#) of the Balancing and Settlement Code (BSC), this document provides guidance on the principles and process by which Credit Assessment Load Factors are calculated and used in the determination of a Trading Party's Energy Indebtedness.

This guidance has been approved by the Imbalance Settlement Group (ISG) on delegated authority from the BSC Panel.

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## 1 Introduction

- 1.1 The BSC requires Trading Parties to lodge credit to cover their estimated Trading Charges for the 29-day period between the Settlement Day and the Initial (SF) Settlement Run. For the first five Working Days of the Credit Cover calculation, until real metered data becomes available, Credit Assessment Load Factors (CALFs) are used in the determination of Credit Assessment Energy Indebtedness (CEI) for non-Interconnector, non-Credit Qualifying Primary Balancing Mechanism (BM) Units. Interconnector or Credit Qualifying Primary BM Units produce Final Physical Notification (FPNs), which are considered more accurate than the CALF approach, and therefore use these FPNs instead.
- 1.2 There are different types of CALF that have been introduced over time:
- 1.3 Prior to 25 June 2015, there was only CALF which was calculated and used for each non-Interconnector, non-Credit Qualifying Primary BM Unit (i.e. both Supplier and non-Supplier Primary BM Units). CALF was defined in Section M of the BSC.
- 1.4 On 25 June 2015, Modification P310 was implemented, which introduced Supplier Export CALF (SECALF), which applies only to Supplier Primary BM Units (that are non-Credit Qualifying) that have a Generation Capacity (GC) of greater than zero and a Demand Capacity (DC) of zero, and was essentially used instead of CALF where applicable (and also has the effect of overriding the use of BMCAIC in favour of BMCAEC). SECALF is not defined in the BSC; only in this document.
- 1.5 On 23 February 2017, Modification P326 was implemented, which introduced a Working Day/non-Working Day distinction to CALF (replacing it with WDCALF and NWDCALF). Due to system design reasons, this also required splitting out BMCAEC (replacing it with WDBMCAEC and NWDBMCAEC) and BMCAIC (replacing it with WDBMCAIC and NWDBMCAIC). Once again, these are only used for non-Interconnector, non-Credit Qualifying Primary BM Units. The new terms are defined in Section M of the BSC.
- 1.6 Where this document refers to CALF, this is used as a soft term to refer to the relevant WDCALF, NWDCALF or SECALF as applicable. Since the implementation of P326 on 23 February 2017, CALF no longer exists as a Data Item under the BSC.
- 1.7 CALF values are calculated for each of the four BSC Seasons, and are a measure of a Primary BM Unit's average generation/demand as a ratio of its maximum for the given BSC Season. Lead Parties of SMRS-registered Primary BM Units and CMRS-registered Consumption Primary BM Units can apply to have two separate WDCALF and NWDCALF values calculated: one for Settlement Periods within an Annual Holiday Period, and one for all other Settlement Days in that BSC Season. Lead Parties who experience reduced demand during the two Annual Holiday Periods of Christmas/New Year and Easter can therefore request reduced 'holiday' WDCALF and NWDCALF values for these periods. CALF values are published for Trading Parties through the Elexon Portal ([www.elexonportal.co.uk](http://www.elexonportal.co.uk)).
- 1.8 The BSC Panel has established, and may review from time to time, principles and guidance under which CALF values are calculated and assigned to different types of Primary BM Unit. This guidance sets out the prevailing principles and guidance.
- 1.9 Section 2 of this guidance describes the background to CALF values and their role in the credit-checking process. The significance of the Production or Consumption Status of a Primary BM Unit in the assignment of CALF is addressed in Section 3. Sections 5 to 12 detail how a CALF is assigned to the different classes of Primary BM Unit: Generators and Directly Connected Consumption Primary BM Units; Supplier Primary BM

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Units; Primary BM Units which are part of multiple Primary BM Unit Trading Units; Commissioning Primary BM Units; and Pumped Storage. Section 11 describes the treatment of Primary BM Units relating to Exemptable Generating Plant (Exempt Export Primary BM Units). Section 12 discusses the revision of CALF values through the CALF appeals process.

1.10 A Primary BM Unit shall be considered a Credit Qualifying Primary BM Unit if it is:

- Obligated to submit Physical Notifications, due either to obligations placed on it under the Grid Code or because it has elected to take part in the Balancing Mechanism; and
- It is not an Interconnector Primary BM Unit; and
- It meets one of the following criteria:
  - It is a Production Primary BM Unit (i.e. it has a Production P/C Status); or
  - It is an Exempt Export Primary BM Unit (regardless of whether its P/C Status is Production or Consumption).

The definition of Credit Qualifying is intended to capture 'generation' Primary BM Units. The criteria are explained further in [BSC Section K3.7](#) and in Section 10 of this guidance. The initial part of the Credit Cover calculation for Credit Qualifying Primary BM Units and Interconnector Primary BM Units uses Final Physical Notifications (FPNs) rather than the combination of CALF and Generation/Demand Capacity values. Interconnector Primary BM Units always have CALF values of zero (see Section 9). Default CALF values are still assigned to Credit Qualifying Primary BM Units to be used in the event that they lose their Credit Qualifying status and until their individual CALF value can be calculated.

1.11 The Panel has delegated responsibility for the maintenance of the CALF principles and guidance, and the processing of CALF appeals, to the Imbalance Settlement Group (ISG).

1.12 The Central Registration Agent (CRA) and Energy Contract Volume Aggregation Agent (ECVAA) BSC Systems are used to support the credit process that CALF is used in:

- CRA
  - Stores Primary BM Unit registration data such as Primary BM Unit Id, Primary BM Unit Type, Lead Party, GSP Group Id, GC, DC, WDCALF, NWDCALF and SECALF and various flags (e.g. Credit Qualifying Flag)
  - Calculates WDBMCAEC, NWDBMCAEC, WDBMCAIC and NWDBMCAIC
  - Sends data to ECVAA
- ECVAA
  - Calculates estimations of metered volume
  - Processes Energy Contract Volume Notifications
  - Processes other data such as Final FPNs, CDCA metered volume data and Trading Charge data
  - Calculates different types of Energy Indebtedness (CEI, MEI and AEI = TEI)
  - Operates a rolling credit check process and alerts BSCCo of threshold breaches

## Further Information

[BM Units – Registration of Balancing Mechanism \(BM\) Units guidance](#)

[Trading Units guidance](#)

[Credit Cover guidance](#)

[BSC Section K: Classification and Registration of Metering Systems and BM Units](#)

[BSC Section M: Credit Cover and Credit Default](#)

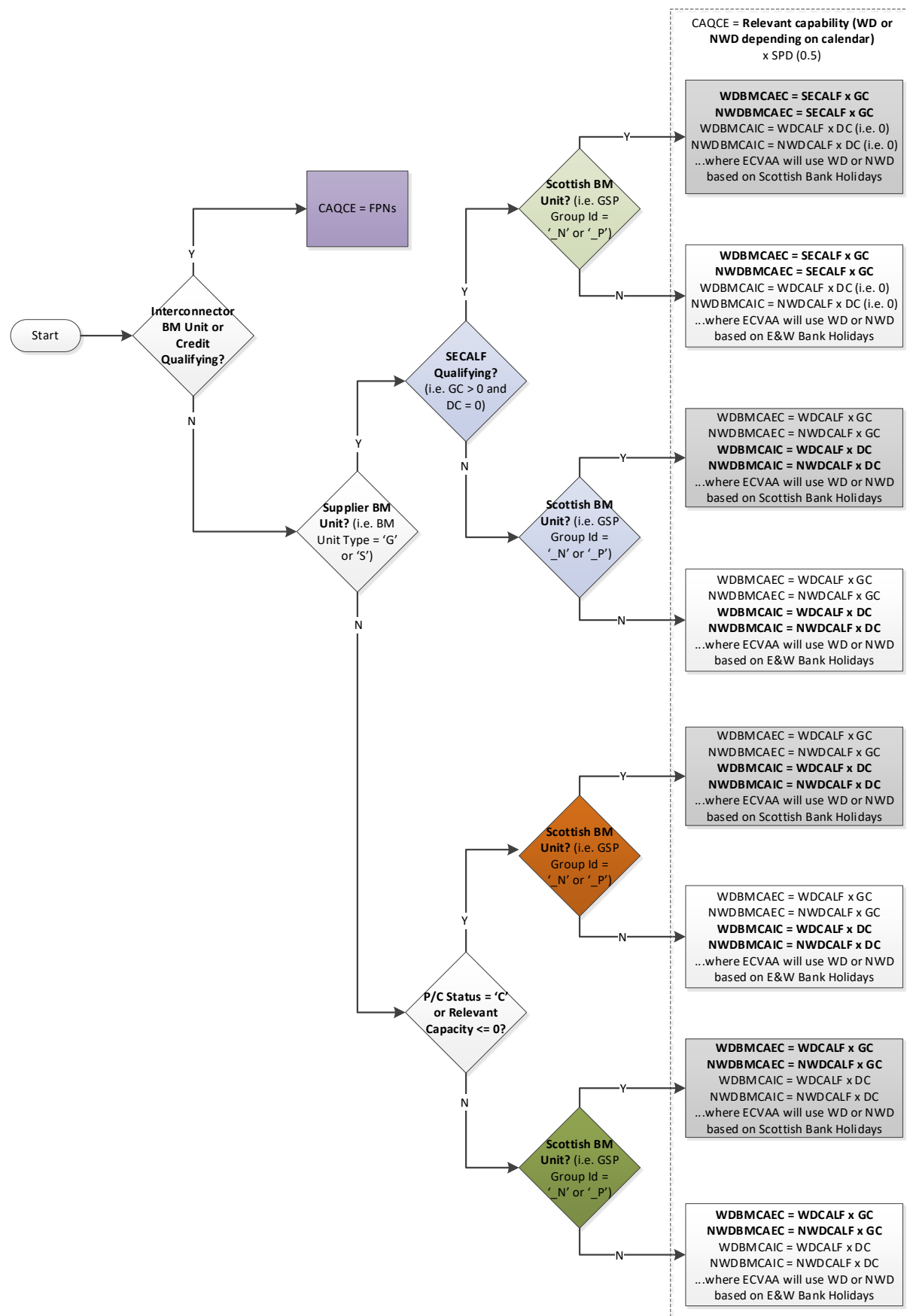
[BSCP15: BM Unit Registration](#)

[BSCP31: Registration of Trading Units](#)

## 2 Background

- 2.1 [BSC Section M](#) sets out the rules governing Credit Cover and Credit Default. BSC Section M1.5.6 describes the procedures for the determination of CALF values. Appendix 1 of this guidance provides a summary of the equations relating to the credit-checking process.
- 2.2 BSC Section M1.5.1 specifies that the Panel shall establish, and may from time to time revise, principles or guidance as to the basis on which CALF values are to be assigned to different types of Primary BM Units. This guidance represents these principles and guidance, as agreed by the ISG under delegated authority from the Panel.
- 2.3 Elexon can revise CALF values in line with this guidance, but the revised value cannot take effect sooner than 20 Working Days after notification unless the Lead Party for the affected Primary BM Unit agrees otherwise (BSC Section M1.5.3).
- 2.4 CALF values are recalculated, in accordance with the prevailing principles and guidance, for each BSC Season. They are made available to Parties through the Elexon Portal ([www.elexonportal.co.uk](http://www.elexonportal.co.uk)). The BSC Seasons are:
- Spring: 1 March to 31 May
  - Summer: 1 June to 31 August
  - Autumn: 1 September to 30 November
  - Winter: 1 December to 28/29 February.
- 2.5 CALFs are key parameters employed in determining a Party's Credit Cover Percentage. Where a Party's Credit Cover Percentage exceeds certain specified values then the Party is deemed to be in Credit Default. The Party is required to take action to cure the Default, in order to avoid an escalation process. This escalation process includes publication of the Party's details and rejection of some or all Energy Contract Volume Notifications and Metered Volume Reallocation Notifications.
- 2.6 Every Primary BM Unit has the following capabilities (in MW) calculated using CALFs, in accordance with BSC Section M1.6:
- Working Day Balancing Mechanism Credit Assessment Export Capability (WDBMCAEC)
  - Non-Working Day Balancing Mechanism Credit Assessment Export Capability (NWDBMCAEC)
  - Working Day Balancing Mechanism Credit Assessment Import Capability (WDBMCAIC)
  - Non-Working Day Balancing Mechanism Credit Assessment Import Capability (NWDBMCAIC)
- 2.7 These capabilities provide an estimate of the MW export or import capability of a Primary BM Unit and are multiplied by the Settlement Period Duration (SPD) of 0.5 hours to get the estimation of metered volume in MWh, known as Credit Assessment Credited Energy Volume (CAQCE). Note that the ECVA system will only use the two Working Day variants or Non-Working Day variants depending on whether the Settlement Date is a Working Day or a Non-Working Day.
- 2.8 The capabilities are derived from the relevant WDCALF, NWDCALF or SECALF, and the Generation Capacity (GC, in MW) or Demand Capacity (DC, in MW), of the Primary BM Unit. The diagram below shows the factors that determine how these capabilities are calculated and the relevant capability (import or export) that would be used (in bold).

## Credit Assessment Load Factors (CALF)



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- 2.9 A Trading Party must declare GC and DC values for each Primary BM Unit for which it is the Lead Party. These values must be notified for each BSC Season, at least 10 Working Days before the start of that season. Subsequent increases during the season which are above a specified threshold, as described in BSC Section K3.4, must also be notified. GC and DC values are declared using the relevant forms in BSCP15: Primary BM Unit Registration.
- 2.10 BSC Section K3.4 requires Trading Parties to notify their expected maximum positive generation and maximum negative demand (i.e. their most positive and most negative Primary BM Unit Metered Volumes, or QMij, in MWh) for the BSC Season. This value is then divided by Settlement Period Duration (0.5 hours) to calculate the GC or DC, in MW (equal to 2 x QMij). Trading Parties should ensure that the value notified is consistent with the units specified on the BSCP15 form.

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## 3 Production or Consumption Status of a Primary BM Unit

- 3.1 In accordance with BSC Section K3.5, each Primary BM Unit is either a Production Primary BM Unit or a Consumption Primary BM Unit in any given Settlement Period. This is known as the Primary BM Unit's P/C Status. GC and DC values (as described in Section 2 of this guidance) are used in the determination of a Primary BM Unit's P/C Status as follows.

### The normal rules (BSC Sections K3.5.2, K3.5.3 and K4)

- 3.2 A Primary BM Unit's P/C Status is normally determined by summing the Relevant Capacities of all Primary BM Units in its Trading Unit (including the Primary BM Unit itself):
- A Primary BM Unit's Relevant Capacity is its GC value if its GC+DC is greater than zero. Its Relevant Capacity is its DC value if its GC+DC is less than or equal to zero.
  - If the sum of all the Primary BM Unit Relevant Capacities in a Trading Unit is greater than zero, then all Primary BM Units in that Trading Unit are normally Production Primary BM Units.
  - If the sum of all the Primary BM Unit Relevant Capacities in a Trading Unit is less than or equal to zero, then all Primary BM Units in that Trading Unit are normally Consumption Primary BM Units.
- 3.3 If a Primary BM Unit is a Sole Trading Unit on its own, then its P/C Status will only be affected by its own GC and DC values. However, if it is part of a Trading Unit with one or more other Primary BM Units, its P/C Status will also be affected by the GC and DC values of the other Primary BM Unit(s). A Primary BM Unit in a Trading Unit with other Primary BM Units may therefore have a Production P/C Status even if its individual Relevant Capacity is its DC value, or a Consumption P/C Status even if its individual Relevant Capacity is its GC value. You can find further information about Trading Units in BSC Section K4 and in [BSCP31: Registration of Trading Units](#).
- 3.4 A Primary BM Unit's P/C Status is re-determined whenever:
- The Primary BM Unit joins or leaves a Trading Unit;
  - Another Primary BM Unit joins or leaves its Trading Unit; and/or
  - There is a change in the GC and/or DC value of the Primary BM Unit or any other Primary BM Unit in its Trading Unit.
- 3.5 Under these rules, a Primary BM Unit's P/C Status can therefore change at any time. However, there are exceptions to these rules for Supplier Primary BM Units, Exempt Export Primary BM Units and Interconnector Primary BM Units (see below).

### Non-Exempt Export Supplier Primary BM Units (BSC Sections K3.3.5, K3.3A, K3.5.7 and K4.7)

- 3.6 Following the implementation of [Approved Modification P269](#) on 23 February 2012, the P/C Status of a non-Exempt Export Supplier Primary BM Unit (whether a Base Primary BM Unit or an Additional Primary BM Unit) is fixed as Consumption and cannot change. The GC and DC values of Supplier Primary BM Units do not affect their own P/C Status or the P/C Status of any other Primary BM Units in their Trading Unit. This is because all non-Exempt Export Supplier Primary BM Units are required to be part of the Base Trading Unit for their Grid Supply Point (GSP) Group, and this Base Trading Unit can only comprise other non-Exempt Export Supplier Primary BM Units and Exempt Export Primary BM Units (see 3.7 below).



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### Exempt Export Primary BM Units (BSC Sections K3.5.5 and K4.7)

- 3.7 Following the implementation of [Approved Modification P268](#) on 23 February 2012, Exempt Export Primary BM Units relating to Exemptable Generating Plant must elect to fix their P/C Status as either Production or Consumption using the relevant form in [BSCP15](#). They can change this election at any time. The GC and DC values of Exempt Export Primary BM Units do not affect their own P/C Status, regardless of whether they are a Sole Trading Unit or part of a Trading Unit with one or more other Primary BM Units. The GC and DC values of an embedded Exempt Export Primary BM Unit also do not affect the P/C Status of any other Primary BM Units if they are part of a Base Trading Unit (with Supplier Primary BM Units and other Exempt Export Primary BM Units in their GSP Group) or part of a Class 4 Trading Unit (with other Exempt Export Primary BM Units in their GSP Group). If an Exempt Export Primary BM Unit forms part of another type of Trading Unit with other, non-Exempt Export and non-Supplier, Primary BM Units then its GC and DC values will affect the P/C Status of these other Primary BM Units. See BSCP31 for more details.

### Interconnector Primary BM Units (BSC Sections K3.5.4 and K5)

- 3.8 Interconnector Primary BM Units are allocated in pairs (one Production Primary BM Unit and one Consumption Primary BM Unit) per Interconnector. The P/C Status of these Interconnector Primary BM Units is fixed and cannot change. The GC and DC values of Interconnector Primary BM Units do not affect their own P/C Status. If an Interconnector Primary BM Unit is part of a Class 5 Trading Unit, then its GC and DC values will affect the P/C Status of any non-Interconnector Primary BM Units (but not any other Interconnector Primary BM Units) in that Trading Unit. The GC value of a Consumption Interconnector Primary BM Unit, and the DC value of a Production Interconnector Primary BM Unit, is always zero and cannot change.

### Interaction between P/C Status and CALF (BSC Section M1.2)

#### *Non-Interconnector, non-Credit Qualifying Primary BM Units*

- 3.9 The registered Production or Consumption Status of a non-Interconnector, non-Credit Qualifying Primary BM Unit is used by BSC Systems to determine whether it is the Primary BM Unit's GC or DC value that is multiplied by its WDCALF and NWDCALF value in the first five Working Days of the Credit Cover calculation. GC\*WDCALF and GC\*NWDCALF is used in the calculation of WDBMCAEC and NWDBMCAEC (in the case of a Production Primary BM Unit), and DC\*WDCALF and DC\*NWDCALF for WDBMCAIC and a NWDBMCAIC (for a Consumption Primary BM Unit). GC, DC and WDCALF and NWDCALF values are not used in the initial part of the Credit Cover calculation for Interconnector or Credit Qualifying Primary BM Units, for whom FPNs are used instead.

#### *Supplier Primary BM Units*

- 3.10 As the P/C Status of all non-Exempt Export Supplier Primary BM Units is fixed as Consumption, a WDBMCAIC and NWDBMCAIC will always be calculated for these Primary BM Units using their DC\*WDCALF and DC\*NWDCALF, unless the Panel has determined that the Primary BM Unit should be Credit Qualifying in accordance with BSC Section K3.7. Normally, the CALF value of a Supplier Primary BM Unit is positive so that, when applied to the Primary BM Unit's negative DC value, it derives the Primary BM Unit's estimated average (negative) demand.

A Supplier Primary BM Unit which contains SVA embedded generation will have a GC which is positive and greater than zero. In this situation, the Supplier can apply voluntarily for an alternative WDCALF and NWDCALF value to reflect its non-zero GC in its WDBMCAIC or NWDBMCAIC. If the Supplier Primary BM Unit's GC is bigger than its DC, this will usually result in a negative WDCALF and/or NWDCALF value.

The Supplier Primary BM Unit's negative DC is then multiplied by this negative WDCALF and NWDCALF value to derive its estimated average (and positive) net generation. See Section 5 of this guidance.

Where the GC is positive and the DC is zero, the Primary BM Unit will qualify for a Supplier Export CALF (SECALF). This will override the fixed P/C status and use GC multiplied by SECALF. See Section 5 of this guidance.



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### *Exempt Export Primary BM Units*

- 3.11 An Exempt Export Primary BM Unit which submits FPNs will be Credit Qualifying in accordance with BSC Section K3.7. It is possible for a non-Credit Qualifying Exempt Export Primary BM Unit to have a Consumption P/C Status (and a credit assessment based on its DC, which may be non-zero) but an individual GC which is greater than DC and/or an average Metered Volume which is greater than zero over a season. This is known issue and, in this situation, the Lead Party can apply for a special WDCALF and NWDCALF values in accordance with Section 5 or Section 11 of this guidance. Exempt Export Primary BM Units, by electing their P/C Status, can also effectively choose whether their GC (WDBMCAEC, NWDBMCAEC) or DC (WDBMCAIC, NWDBMCAIC) is used in the Credit Cover calculation – except where the Exempt Export Primary BM Unit has a Production P/C Status but an individual Primary BM Unit Relevant Capacity of less than or equal to zero, in which case its DC will be used to calculate a WDBMCAIC and NWDBMCAIC.

### *Generation Primary BM Units*

- 3.12 Non-Exempt Export generation Primary BM Units which submit FPNs and have a Production P/C Status will be Credit Qualifying. Otherwise their Credit Cover will be based on WDBMCAEC and NWDBMCAEC (WDCALF\*GC, NWDCALF\*GC) if the Primary BM Unit has both a Production P/C Status and a Relevant Capacity greater than zero, or on WDBMCAIC and NWDBMCAIC (WDCALF\*DC, NWDCALF\*DC) if the Primary BM Unit has a Consumption P/C Status and/or a Relevant Capacity which is less than or equal to zero.

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## 4 Generators and Directly Connected Consumption Primary BM Units

- 4.1 This Section specifically addresses the calculation of CALF values for Primary BM Units registered in the Central Meter Registration Service (CMRS). This includes generator Primary BM Units, station load and other demand Primary BM Units (for example, industrial demand), and embedded generation and demand that are not deemed to be Credit Qualifying Primary BM Units. It does not include Primary BM Units registered in the Supplier Meter Registration Service (SMRS) nor Pumped Storage Primary BM Units, which are considered separately in this document.
- 4.2 Please note that these types of Primary BM Units were out of scope of P326 and as such will not have a Working Day/Non-Working Day distinction. Therefore references to CALF in this section mean the relevant WDCALF or NWDCALF (the values of which are the same).
- 4.3 WDCALF/NWDCALF values for generation Primary BM Units are determined based on the net metered Production of that Primary BM Unit in the equivalent BSC Season of the previous year.

$$CALF = \frac{\text{average net metered Production for the BSC Season (MWh)}}{\text{maximum metered Production for the BSC Season (MWh)}}$$

Where the average net metered Production is defined as the total net metered Production over the BSC Season divided by the number of Settlement Periods within that season. The maximum metered Production is defined as the maximum Production in any one Settlement Period during that BSC Season.

- 4.4 WDCALF/NWDCALF values for Consumption Primary BM Units are determined from the net metered Consumption of that Primary BM Unit in the equivalent BSC Season of the previous year.

$$CALF = \frac{\text{average net metered Consumption for the BSC Season (MWh)}}{\text{maximum metered Consumption for the BSC Season (MWh)}}$$

Where the average net metered Consumption is defined as the total net Consumption over the BSC Season divided by the number of Settlement Periods within that season. The maximum metered Consumption is defined as the maximum Consumption in any one Settlement Period during that BSC Season.

- 4.5 For Primary BM Units which have both a Production and Consumption capability, the WDCALF/NWDCALF value is determined from the ratio of the average net metered volume in MWh over the BSC Season, divided by the maximum generation in that season (for Production Units) or the maximum demand in that season (in the case

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of Consumption Units). This would yield a negative WDCALF/NWDCALF value where the Primary BM Unit is a net consumer but is assigned Production status or a net producer but is assigned Consumption status.

- 4.6 New Production Primary BM Units based upon Onshore or Offshore Wind technology will be allocated a generic WDCALF/NWDCALF value for the first twelve months, as will Primary BM Units of this type migrating from SMRS to CMRS. This generic value has been calculated from historical performance data published on the [Department for Business, Energy & Industrial Strategy](#) website. The value is currently set to 0.2900 and has been rounded to 2.d.p. Further changes to this generic value will only be made by the ISG or the Panel. After twelve months a WDCALF/NWDCALF value will be assigned based upon historical performance for the equivalent BSC Season of the preceding year, in accordance with paragraph 4.3 above.
- 4.7 New Production Primary BM Units based upon Biofuel technology will be allocated a generic WDCALF/NWDCALF value for the first twelve months, as will Primary BM Units of this type migrating from SMRS to CMRS. This generic value has been calculated from historical performance data published on the Department for Business, Energy & Industrial Strategy website and is currently set to 0.6230. Further changes to this generic value will only be made by the ISG or the Panel. After twelve months a CALF value will be assigned based upon historical performance for the equivalent BSC Season of the preceding year, in accordance with paragraph 4.3 above.
- 4.8 Production Primary BM Units based upon Pumped Storage technology migrating from SMRS to CMRS will be assigned a generic WDCALF/NWDCALF value until three months metered data is available. The generic WDCALF/NWDCALF value is based upon the historical average WDCALF/NWDCALF of existing Pumped Storage Primary BM Units in CMRS. This value is currently set to -0.0378. Further changes to this generic value will only be made by the ISG or the Panel. After three months metered data becomes available, the WDCALF/NWDCALF value for the next BSC Season will be calculated from metered data for the previous three months. After twelve months the WDCALF/NWDCALF value will be calculated from the net metered Production of the Primary BM Unit in the equivalent BSC Season of the preceding year, in accordance with paragraph 8.2.
- 4.9 Production Primary BM Units based upon Open Cycle Gas Turbine (OCGT) technology migrating from SMRS to CMRS will be assigned a generic WDCALF/NWDCALF value until three months metered data is available. The generic WDCALF/NWDCALF value is based upon the historical average WDCALF/NWDCALF of existing OCGT Primary BM Units in CMRS. This value is currently set to 0.0087. Further changes to this generic value will only be made by the ISG or the Panel. After three months metered data becomes available, at which point the WDCALF/NWDCALF value for the next BSC Season will be calculated from metered data for the previous three months. After twelve months the WDCALF/NWDCALF value will be calculated from the net metered Production of the Primary BM Unit in the equivalent BSC Season of the preceding year, in accordance with paragraph 4.3 above.
- 4.10 Production Primary BM Units based upon Hydro technologies migrating from SMRS to CMRS will be assigned a generic WDCALF/NWDCALF value until three months' metered data is available. The generic WDCALF/NWDCALF value is based upon the historical average WDCALF/NWDCALF of existing Hydro Primary BM Units in CMRS. This value is currently set to 0.2938. Further changes to this generic value will only be made by the ISG or the Panel. After three months metered data becomes available, the WDCALF/NWDCALF value for the next BSC Season will be calculated from metered data for the previous three months. After twelve months the WDCALF/NWDCALF value will be calculated from the net metered Production of the Primary BM Unit in the equivalent BSC Season of the preceding year, in accordance with paragraph 4.3 above.
- 4.11 Production Primary BM Units based upon Combined Cycle Gas Turbine (CCGT) technology migrating from SMRS to CMRS will be assigned a generic WDCALF/NWDCALF value until three months' metered data is available. The generic WDCALF/NWDCALF value is based upon the historical average WDCALF/NWDCALF of existing CCGT Primary BM Units in CMRS. This value is currently set to 0.5411. Further changes to this generic value will only be made by the ISG or the Panel. After three months metered data becomes available, at which point the WDCALF/NWDCALF value for the next BSC Season will be calculated from metered data for the previous three months. After twelve months the WDCALF/NWDCALF value will be calculated from the net metered Production of the Primary BM Unit in the equivalent BSC Season of the preceding year, in accordance with paragraph 4.3 above.
- 4.12 For new Consumption Primary BM Units a generic WDCALF/NWDCALF value will be assigned until three months metered data is available. This generic WDCALF/NWDCALF value is based upon the historical average of all other Consumption Primary BM Units in CMRS. This value is currently set to 0.3622. Further changes to this generic value will only be made by the ISG or the Panel. After three months metered data becomes

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available, the WDCALF/NWDCALF value for the next BSC Season will be calculated from metered data for the previous three months. After twelve months the WDCALF/NWDCALF value will be calculated from the net metered Consumption of the Primary BM Unit in the equivalent BSC Season of the previous year, in accordance with paragraph 4.4 above.

- 4.13 For new Rail Demand Primary BM Units a generic WDCALF/NWDCALF value will be assigned until three months' metered data is available. This generic WDCALF/NWDCALF value is based upon the historic average of all other Rail Demand Primary BM Units in CMRS. This value is currently set to 0.2047. Further changes to this generic value will only be made by the ISG or the Panel. After three months metered data becomes available, at which point the WDCALF/NWDCALF value for the next BSC Season will be calculated from metered data for the previous three months. After twelve months the WDCALF/NWDCALF value will be calculated from the net metered Consumption of the Primary BM Unit in the equivalent BSC Season of the previous year, in accordance with paragraph 4.4 above.

**A list of generic CALF values is displayed in Table 1.**

**Table 1**

Fuel Type	WDCALF/NWDCALF
Wind	0.2900
Biofuel	0.6230
Hydro	0.2938
Pumped Storage	-0.0378
OCGT	0.0087
CCGT	0.5411
CVA Consumption	0.3622
Rail Demand	0.2047
Station Load	0.0664

(Station Load is referred to in Appendix 4. Also, the generic WDCALF/NWDCALF values for Hydro, Pumped Storage, OCGT and CCGT only apply for Primary BM Units migrating from SMRS to CMRS.)

## 5 Supplier Meter Registration Service (SMRS) Registered Primary BM Units

- 5.1 Under BSC Section K3.3, a Supplier will have one Base Primary BM Unit per GSP Group (fourteen in total). A Supplier can also register Additional Primary BM Units for one or more GSP Groups. This Section addresses the calculation of WDCALF and NWDCALF values for Primary BM Units with meters registered in a SMRS. For the avoidance of doubt, this includes Exempt Export Primary BM Units registered in a SMRS. The basic approach is described in paragraphs 5.5 and 5.6 below and the approach for certain special cases in the remainder of this Section.
- 5.2 Please note that Supplier Primary BM Units were in scope of P326 and as such may have a Working Day/Non-Working Day distinction. Therefore references to CALF in this section mean the relevant WDCALF, NWDCALF or SECALF.

### Calculation of Seasonal WDCALF and NWDCALF Values

- 5.3 CALF values are calculated and published to BSC Parties around 3 months ahead of the BSC Season (e.g. Spring 2017) that they are intended to be used. The calculations are done using Primary BM Unit Metered Volume data for that BSC Season, but in the previous year (e.g. Spring 2016), and this is called the Reference Season.
- 5.4 The CALF values are calculated in one of two ways, depending on whether the average Primary BM Unit Metered Volume in the Reference Season was greater than or less than zero. This is because Supplier Primary

## Credit Assessment Load Factors (CALF)

BM Units can contain a mix of generation and consumption sites, which could result in a positive (net generation) or negative (net consumption) value of Primary BM Unit Metered Volume.

- 5.5 Where the average Primary BM Unit Metered Volume was less than zero then WDCALF and NWDCALF are calculated as:

$$WDCALF (MWh) = \frac{\text{average Primary BM Unit Metered Volume (Working Days only) for the BSC Season}}{\text{minimum Primary BM Unit Metered Volume (all days) for the BSC Season (MWh)}}$$
$$NWDCALF (MWh) = \frac{\text{average Primary BM Unit Metered Volume (Non – Working Days only) for the BSC Season}}{\text{minimum Primary BM Unit Metered Volume (all days) for the BSC Season (MWh)}}$$

where the average Primary BM Unit Metered Volume (Working Days only) for the BSC Season (MWh) and average Primary BM Unit Metered Volume (Non-Working Days only) for the BSC Season (MWh) are defined as the total Primary BM Unit Metered Volume over the BSC Season divided by the number of Settlement Periods within that BSC Season. The minimum Primary BM Unit Metered Volume (all days) for the BSC Season (MWh) is defined as the minimum value of Primary BM Unit Metered Volume in any one Settlement Period falling within that BSC Season.

- 5.6 Where the average Primary BM Unit Metered Volume was greater than zero then WDCALF and NWDCALF are calculated as:

$$WDCALF (MWh) = \frac{\text{average Primary BM Unit Metered Volume (Working Days only) for the BSC Season}}{\text{average Primary BM Unit Metered Volume (Working Days only) for the BSC Season}}$$
$$NWDCALF (MWh) = \frac{\text{average Primary BM Unit Metered Volume (Non – Working Days only) for the BSC Season}}{\text{maximum Primary BM Unit Metered Volume (all days) for the BSC Season (MWh)}}$$

where the average Primary BM Unit Metered Volume (Working Days only) for the BSC Season (MWh) and average Primary BM Unit Metered Volume (Non-Working Days only) for the BSC Season (MWh) are defined as the total Primary BM Unit Metered Volume over the BSC Season divided by the number of Settlement Periods within that BSC Season. The maximum Primary BM Unit Metered Volume (all days) for the BSC Season (MWh) is defined as the maximum value of Primary BM Unit Metered Volume in any one Settlement Period falling within that BSC Season.

- 5.7 Where the average Primary BM Unit Metered Volume was equal to zero then WDCALF and NWDCALF will be calculated as zero.
- 5.8 The result of this approach is that a positive (or zero) WDCALF and NWDCALF values will be calculated for all SMRS-registered Primary BM Units. In the case of Exempt Export Primary BM Units (whose average metered volume across a BSC Season will typically be greater than zero) the Lead Party must elect whether its P/C Status is “P” or “C”. If the Primary BM Unit is “C” status, then a WDBMCAIC and NWDBMCAIC will be calculated. Where the Primary BM Unit’s average Primary BM Unit Metered Volume is greater than zero and the declared DC is non-zero, then a negative WDBMCAIC and NWDBMCAIC will be calculated. This will not give an accurate reflection of the Primary BM Unit’s behaviour in the Energy Indebtedness calculation. This is a known and pre-existing issue with the CALF methodology (the problem is described in the context of CMRS-registered Primary BM Units in Section 11 of this guidance)<sup>1</sup>. Potential workarounds are frustrated by the fact that the applicable P or C Status may not be known at the time of calculating WDCALF and NWDCALF values<sup>2</sup>, and in any event this may be varied at any time at the option of the Lead Party. It is possible for such Primary BM Units to have Credit Qualifying status, if the Primary BM Unit fulfils the criteria laid out in paragraph 10.2. Their Primary BM Unit FPNs would be used in the CEI part of the credit calculation, thereby more accurately reflecting that Primary BM Unit’s activity. It is suggested that where Parties adopt a Production or Consumption status at variance with their actual behaviour, there will typically be other benefits associated to this decision that outweigh the consequences for the Energy Indebtedness calculation.

<sup>1</sup> BSCCo will keep this issue under review and, should a suitable solution be identified, this will be presented to the ISG at a future date. Should ISG members or other interested Parties wish to recommend solutions, they are invited to contact the ISG secretary.

<sup>2</sup> Under BSC Section K3.5.5 the P/C Status notified will become effective in the timescales set out in BSCP15. For new Primary BM Unit registrations, this will be 28 days (the length of the registration process). For existing Primary BM Units, this will be two Working Days (or sooner if requested by the Lead Party and agreed by the Central Registration Agent/Ellexon).

## Credit Assessment Load Factors (CALF)

### SVA Registered Embedded Generation

- 5.9 Where Supplier Primary BM Units have Embedded Generation, the above is unlikely to give an accurate reflection of the Primary BM Unit's behaviour in the Energy Indebtedness calculation. This is because the total Consumption within the Base Trading Unit is likely to be greater than the total Embedded Generation and, because the P/C Status of a Base Primary BM Unit is normally 'C' (Consumption)<sup>3</sup>, BSC Systems will calculate a WDBMCAIC and NWDBMCAIC for the Primary BM Unit using WDCALF, NWDCALF and DC thus ignoring the Generation element.
- 5.10 There are two options to more accurately reflect Embedded Generation. A workaround referred to as 'alternative CALF' and the SECALF solution. Modification P310, effective from 25 June 2015, introduces the SECALF calculation.

### Supplier Export CALF

- 5.11 A SECALF will be applied where the Supplier Primary BM Unit has a positive GC and zero DC (hereafter referred to as SECALF-qualifying). In this scenario the BMCAEC will be used instead of the BMCAIC in the CEI calculation, hence reflecting generation.
- 5.12 Like WDCALF and NWDCALF, SECALF is calculated using Primary BM Unit Metered Volume data for that Reference Season, however only for days where the Primary BM Unit was SECALF-qualifying.
- 5.13 Where the average Primary BM Unit Metered Volume for SECALF-qualifying days was less than zero then SECALF is calculated as:

$$SECALF (MWh) = \frac{\text{average Primary BM Unit Metered Volume (SECALF – qualifying days only) for the BSC Season}}{\text{minimum Primary BM Unit Metered Volume (SECALF – qualifying days only) for the BSC Season (MWh)}}$$

- 5.14 Where the average Primary BM Unit Metered Volume for SECALF-qualifying days was greater than zero then SECALF is calculated as:

$$SECALF (MWh) = \frac{\text{average Primary BM Unit Metered Volume (SECALF – qualifying days only) for the BSC Season}}{\text{maximum Primary BM Unit Metered Volume (SECALF – qualifying days only) for the BSC Season (MWh)}}$$

- 5.15 Where the average Primary BM Unit Metered Volume for SECALF-qualifying days was equal to zero then SECALF will be calculated as zero.

### Alternative CALF for Embedded Generators

- 5.16 A manual workaround is used for Supplier Primary BM Units with both Embedded Generation and demand. A Party can submit a request for the WDCALF and NWDCALF values to be calculated using the methodology defined below. An application is made using the form in Appendix 7, at least one month prior to the start of the Season.
- 5.17 On receipt of the application for a Supplier Primary BM Unit, the WDCALF and NWDCALF values will be determined as follows:
- Initially two GC/DC Factors will be calculated; one for Working Days and one for Non-Working Days. For the Reference Season which is being used to derive values for the current BSC Season, these factors are derived to express the weighting of the Generation and Demand Capacities on the Working Day Net Average Metered Volume and Non-Working Day Net Average Metered Volume using the following formula:

$$WDx = \left( \frac{WDNet.Av - RDC}{RGC - RDC} \right)$$

and

$$NWDx = \left( \frac{NWDNet.Av - RDC}{RGC - RDC} \right)$$

<sup>3</sup> If a Base Primary BM Unit is flagged as an Exempt Export BM Unit then the Supplier can choose the P/C Flag.



## Credit Assessment Load Factors (CALF)

Where:

WDx Represents the fraction of the range from RDC (which is negative) to RGC (which is positive) where the average net flow (Working Days only) over the Reference Season lies.

For example, if RDC was -10 and RGC was +10 and average flow was -5, x would be 0.25 indicating that average flow was at a level of 0.25 of the range of 20 from RDC to RGC.

NWDx Represents the fraction of the range from RDC (which is negative) to RGC (which is positive) where the average net flow (Non-Working Days only) over the Reference Season lies.

WDNet.Av (Working Day Average Net Output (MW)) is the total Working Day net Metered Volume for the referenced BSC Season divided by the number of Settlement Periods within that season and then divided by Settlement Period Duration (0.5).

NWDNet.Av (Non-Working Day Average Net Output (MW)) is the total Non-Working Day net Metered Volume for the referenced BSC Season divided by the number of Settlement Periods within that season and then divided by Settlement Period Duration (0.5).

RDC (Reference Season Demand Capacity) the Demand Capacity for the last Settlement Day falling within a Reference Season.

RGC (Reference Season Generation Capacity) the Generation Capacity for the last Settlement Day falling within a Reference Season.

- Then the CALF Value is calculated using the following formula

$$WDCALF = \frac{(WDx.SGC + (1 - WDx).SDC)}{SDC}$$

$$NWDCALF = \frac{(NWDx.SGC + (1 - NWDx).SDC)}{SDC}$$

Where:

SDC = Current Season Demand Capacity

SGC = Current Season Generation Capacity

WDx = GC/DC Factor (applicable for Working Days)

NWDx = GC/DC Factor (applicable for Non-Working Days)

- 5.18 Then continuing with the above example If SDC and SGC were -10 and +30, the method of determining WDCALF or NWDCALF would give an estimated average flow of  $(0.25 \times 30 + (1 - 0.25) \times -10) / -10 = 0$ .

- 5.19 Alternatively, Suppliers having Primary BM Units with both demand and generation can decide to register Additional Primary BM Units to split the two and benefit from Modification P310. Registering Additional Primary BM Units only containing generation will allow the BSC Systems to consider a Supplier's generation in the Credit Cover Percentage calculation by applying a SECALF value to the Generation Capacity (GC) declared. This may consequently reduce the amount of Credit Cover needed by the Party. Registering Additional Primary BM Units can be done by completing the BSCP15 'Primary BM Unit Registration' form, and the Market Domain Data (MDD) Entity 61 "BM Unit for Supplier in GSP Group" form.

### Mid-Season Change of Generation and Demand Capacities

- 5.20 For the methodology described in paragraph 5.17, changes, in particular those relating to a Demand Capacity for the Primary BM Unit, could have the effect of incorrectly improving a BSC Party's Credit Position. Therefore, on receipt of a change in the Demand or Generation Capacity of a Primary BM Unit, the CALF value will be recalculated using the same formula: e.g.

$$WDCALF = \frac{(WDx.SGC + (1 - WDx).SDC)}{SDC}$$

## Credit Assessment Load Factors (CALF)

$$NWDCALF = \frac{(NWDx.SGC + (1 - NWDx).SDC)}{SDC}$$

Where:

SDC = Current Season Demand Capacity

SGC = Current Season Generation Capacity

WDx = GC/DC Factor (applicable for Working Days)

NWDx = GC/DC Factor (applicable for Non-Working Days)

- 5.21 Note that, for Supplier Primary BM Units, if changes to GC/DC are required; the DC value can only be lowered twice during a BSC Season, however, both GC and DC can be increased (in absolute value) as many times as required by the party.

### SVA Registered Exempt Export Primary BM Units

- 5.22 In the case of SVA Exempt Export Primary BM Units (whose average metered volume across a BSC Season will also typically be greater than zero) the Lead Party must elect whether its P/C Status is Production or Consumption. See Section 3.

- 5.23 If the Primary BM Unit is "C" status, then a WDBMCAIC and NWDBMCAIC will be calculated and if similar circumstances exist to those described in Section 5.9 above this will not give an accurate reflection of the Primary BM Unit's behaviour in the Energy Indebtedness calculation. Where the Primary BM Unit has a positive GC and zero DC, a WDBMCAEC and NWDBMCAEC will be applied, using a SECALF value along with the GC (see Section 5.11). If the Primary BM Unit has both generation and demand and the average net Metered Volume for the equivalent BSC Season the previous year was greater than zero, the Party can submit a request for the WDCALF and NWDCALF values to be calculated using the methodology defined in this sub-Section, by completing the application in Appendix 7, one month prior to the start of the Season.

On receipt of the application for the Exempt Export Primary BM Unit, the WDCALF and NWDCALF values will be determined as follows:

- Initially a GC/DC Factor will be calculated. For the Reference Season which is being used to derive values for the current BSC Season, this factor is derived to express the weighting of the Generation and Demand Capacities on the Net Average Metered Volume using the following formulas:

$$WDx = \left( \frac{WDNet.Av - RDC}{RGC - RDC} \right)$$
$$NWDx = \left( \frac{NWDNet.Av - RDC}{RGC - RDC} \right)$$

Where:

WDx Represents the fraction of the range from RDC (which is negative) to RGC (which is positive) where the average net flow (Working Days only) over the reference season lies.

For example, if RDC was -10 and RGC was +10 and average flow was -5, x would be 0.25 indicating that average flow was at a level of 0.25 of the range of 20 from RDC to RGC.

NWDx Represents the fraction of the range from RDC (which is negative) to RGC (which is positive) where the average net flow (Non-Working Days only) over the Reference Season lies.  $WDNet.Av$  = Working Day Average Net Metered Volume is defined as the total Working Day net Metered Volume for the referenced BSC Season divided by the number of Settlement Periods within that season.

$WDNet.Av$  (Working Day Average Net Output (MW)) is the total Working Day net Metered Volume for the referenced BSC Season divided by the number of Settlement Periods within that season, and then divided by Settlement Period Duration (0.5).



## Credit Assessment Load Factors (CALF)

NWDNet.Av (Non-Working Day Average Net Output (MW)) is the total Non-Working Day net Metered Volume for the referenced BSC Season divided by the number of Settlement Periods within that season and then divided by Settlement Period Duration (0.5).

RDC (Reference Season Demand Capacity) the Demand Capacity for the last Settlement Day falling within a Reference Season.

RGC (Reference Season Generation Capacity) the Generation Capacity for the last Settlement Day falling within a Reference Season.

- Then the WDCALF and NWDCALF values are calculated using the following formulas:

$$WDCALF = \frac{(WDx.SGC + (1 - WDx).SDC)}{SDC}$$
$$NWDCALF = \frac{(NWDx.SGC + (1 - NWDx).SDC)}{SDC}$$

Where:

SDC = Current Season Demand Capacity

SGC = Current Season Generation Capacity

WDx = GC/DC Factor (applicable for Working Days)

NWDx = GC/DC Factor (applicable for Working Days)

Then continuing with the above example, if SDC and SGC were -10 and +30, the method of determining WDCALF and NWDCALF would give an estimated average flow of  $(0.25 \times 30 + (1 - 0.25) \times -10) / -10 = 0$ .

### Mid-Season Change of Generation and Demand Capacities

5.24 For the methodology described in Section 5.9 changes, in particular those relating to a Demand Capacity for the Primary BM Unit, could have the effect of incorrectly improving a BSC Party's Credit Position.

5.25 Therefore, on receipt of a change in the Demand or Generation Capacity of a Primary BM Unit, the WDCALF and NWDCALF values will be recalculated using the same formula: e.g.

$$WDCALF = \frac{(WDx.SGC + (1 - WDx).SDC)}{SDC}$$
$$NWDCALF = \frac{(NWDx.SGC + (1 - NWDx).SDC)}{SDC}$$

Where:

SDC = Current Season Demand Capacity

SGC = Current Season Generation Capacity

WDx = GC/DC Factor (applicable for Working Days)

NWDx = GC/DC Factor (applicable for Non-Working Days)

## Credit Assessment Load Factors (CALF)

### Generic WDCALF and NWDCALF values

- 5.26 Where the Primary BM Unit had zero metered volume in the equivalent BSC Season of the previous year, or non-zero metered volumes were not first submitted in respect of the Primary BM Unit until after the start of that Season, a generic WDCALF and NWDCALF value will be assigned. This will be calculated as the average of all WDCALF and NWDCALF values assigned to Primary BM Units in the relevant GSP Group.
- 5.27 Changes in a Supplier's customer portfolio in a given GSP Group between the period used for the calculation and the present may affect the WDCALF and NWDCALF characteristics of the relevant Primary BM Unit(s). The impact will depend on the mix of Metering Systems registered before and after the portfolio change. Analysis indicates that, for most Primary BM Units, the typical year-on-year variation between the proportion of the Primary BM Unit's metered volume that is HH metered, as opposed to NHH, is less than 20%. As a crude control, therefore, where the absolute difference between the percentage HH: NHH contributions to Primary BM Unit metered volume is more than 20% between the BSC Season used to calculate WDCALF and NWDCALF and the most recent 30-day period for which data is available, then a generic WDCALF and NWDCALF values will be applied, calculated as described in paragraph 5.9.
- 5.28 The generic WDCALF and NWDCALF value may not be appropriate for Supplier Primary BM Units with embedded generation. In this case the Supplier has the option to raise a CALF Appeal by following the process detailed in Section 12. If the Supplier did not submit a CALF Appeal, but has good reason for not doing so – for example acquiring embedded generation after the CALF Appeal deadline – then it can request that Elexon calculates an interim WDCALF and NWDCALF values. Elexon will only calculate an interim WDCALF and NWDCALF value upon receipt of substantial evidence from the Lead Party of the Primary BM Unit's expected maximum and average generation and demand for the BSC Season. Elexon will report details of any such calculation to the ISG. If a lack of reference data means that a generic WDCALF and NWDCALF value would again be assigned for the following BSC Season, then the Lead Party must submit a CALF Appeal in accordance with Section 12.

### Generic SECALF values

- 5.29 As with WDCALF and NWDCALF, there are instances where a SECALF value cannot be calculated for a BSC Season.

**A list of generic SECALF values is displayed in Table 2.**

**Table 2**

BSC Season	Generic SECALF
<del>Spring 2021</del>	<del>0.2300</del>
<del>Summer 2021</del>	<del>0.2400</del>
<del>Autumn 2021</del>	<del>0.2700</del>
<del>Winter 2021</del>	<del>0.2700</del>
Spring 2022	0.2300
Summer 2022	0.2400
<del>Autumn 2022</del>	<del>0.2700</del>
<del>Winter 2022</del>	<del>0.2500</del>
<del>Spring 2023</del>	<del>0.2300</del>
<del>Summer 2023</del>	<del>0.2400</del>

- 5.30 Where a Supplier Primary BM Unit would receive a SECALF per Section 5.11, it will be assigned a generic SECALF instead if one or more of the following are true:

## Credit Assessment Load Factors (CALF)

- The Supplier Primary BM Unit had an average metered volume of less than or equal to zero, over the equivalent BSC Season of the previous year
- Non-zero metered volumes were not first submitted in respect of the Supplier Primary BM Unit until after the start of that Season
- The Supplier Primary BM Unit was not SECALF qualifying in that Season

5.31 Suppliers have the option to appeal a generic SECALF value under the process detailed in Section 12.

5.32 Generic SECALF values are reviewed annually at the start of May. Elexon will recalculate the four generic SECALF values as follows:

- All SECALF qualifying Primary BM Units in each of the previous four Seasons will be identified.
- The SECALF for each Primary BM Unit will be calculated as follows:
  - Where the average Primary BM Unit Metered Volume for SECALF-qualifying days was less than zero then SECALF is calculated as:

$$SECALF = \frac{\text{average Primary BM Unit Metered Volume (SECALF – qualifying days only) for the BSC Season (MWh)}}{\text{minimum Primary BM Unit Metered Volume (SECALF – qualifying days only) for the BSC Season (MWh)}}$$

- Where the average Primary BM Unit Metered Volume for SECALF-qualifying days was greater than zero then SECALF is calculated as:

$$SECALF = \frac{\text{average Primary BM Unit Metered Volume (SECALF – qualifying days only) for the BSC Season (MWh)}}{\text{maximum Primary BM Unit Metered Volume (SECALF – qualifying days only) for the BSC Season (MWh)}}$$

- Where the average Primary BM Unit Metered Volume for SECALF-qualifying days was equal to zero then SECALF will be calculated as zero.
- For each Season the average of all non-zero SECALFs will be taken to give the SECALF for each Season
- Where a recalculated generic SECALF has a difference from the current generic SECALF of greater than or equal to 0.02, Elexon will present this to ISG. ISG will consider the new generic SECALF value for approval and if granted, Elexon will use the new set of generic SECALF values from the next publication onwards.

5.33 Due to the calendar timings, the next BSC Season to use the generic SECALFs after approval will be Autumn of that year. Therefore Spring and Summer values for the current and following year will be published.

## Holiday and Rest of Season WDCALF/NWDCALF values

5.34 BSC Section M1.5A specifies two Annual Holiday Periods “for purposes associated with the Credit Assessment Load Factor”. One Annual Holiday Period covers the Christmas – New Year period and the other covers the Easter holiday period. These are defined formulaically in the Code to consist of consecutive whole Settlement Days as follows:

### Easter Holiday Period

Thursday	Good Friday (Bank Holiday)	Saturday	Sunday	Easter Monday (Bank Holiday)	Tuesday
----------	-------------------------------	----------	--------	---------------------------------	---------

### Christmas New Year Holiday Period

24 December (Christmas Eve) falls on:	Commencement Day:	Conclusion Day:
Sunday	23 December	2 January
Monday	22 December	2 January
Tuesday	21 December	2 January
Wednesday	24 December	4 January

Credit Assessment Load Factors (CALF)

Thursday	24 December	3 January
Friday	24 December	4 January
Saturday	24 December	3 January

## Credit Assessment Load Factors (CALF)

5.35 Lead Parties of SMRS-registered Primary BM Units and CMRS-registered Consumption Primary BM Units are permitted to elect, in place of the base Seasonal WDCALF and NWDCALF values and for some or all of their SMRS-registered Primary BM Units and CMRS-registered Consumption Primary BM Units, to be assigned two separate WDCALF and NWDCALF values for each of the two BSC Seasons in which Annual Holiday Periods occur:

- One 'Holiday' WDCALF and NWDCALF value to apply to Settlement Periods within an Annual Holiday Period (HOL) and;
- One 'normal' WDCALF and NWDCALF value to apply to all other Settlement Periods in the BSC Season in which the Annual Holiday Period falls (XHOL).

For avoidance of doubt, where the Lead Party does not elect this for one or more of its Primary BM Units, a single seasonal WDCALF and NWDCALF value will be calculated for those Primary BM Unit(s) in accordance with the base methodology.

5.36 Where separate WDCALF and NWDCALF values are calculated for Settlement Periods falling, respectively, within and outside of the Annual Holiday Period, these periods will be referred to as HOL and XHOL respectively, and the associated WDCALF and NWDCALF values, HOL-WDCALF, HOL-NWDCALF, XHOL-WDCALF and XHOL-NWDCALF.

5.37 Parties will be asked to submit a HOL-Ratio for each of their Primary BM Units for which they require a WDHOL, NWDHOL, and XHOL-WDCALF and XHOL-NWDCALF to be applied. The HOL-Ratio is defined to be the value which represents, in the good faith assessment of the Lead Party and in respect of the forthcoming BSC Season to which it is to be applied, the following quotient:

$$\begin{aligned} WDHOL - Ratio &= \frac{\text{HOL Working Day average Settlement Period metered volume}}{\text{Season Working Day average Settlement Period metered volume}} \\ NWDHOL - Ratio &= \frac{\text{HOL Non - Working Day average Settlement Period metered volume}}{\text{Season Non - Working Day average Settlement Period metered volume}} \end{aligned}$$

Where:

$$\text{HOL - WDCALF} = \text{WDCALF} * \text{HOL - Ratio}$$

$$\text{HOL - NWDCALF} = \text{NWDCALF} * \text{HOL - Ratio}$$

and subject to the requirement that the magnitude of neither the HOL-CALFs (WD/NWD) nor the XHOL-CALFs (WD/NWD) derived in this calculation be greater than 1. For the avoidance of doubt, where a Lead Party submits a HOL-Ratio which would result in a HOL- (WD/NWD) or XHOL-CALFs (WD/NWD) being calculated with magnitude greater than 1, the Party will be requested to resubmit the HOL-Ratio. Where the Party does not re-submit a compliant HOL-Ratio within requested timescales, BSCCo will apply the appropriate Seasonal WDCALF and NWDCALF to the Primary BM Unit concerned.

5.38 The XHOL-CALFs (WD/NWD) will be calculated by BSCCo from the HOL-Ratio and the Seasonal WDCALF and NWDCALF as defined in Appendix 2. The definition is such that the aggregate WDBMCAIC, NWDBMCAIC (or WDBMCAEC, NWDBMCAIC as the case may be) attributed to the Primary BM Unit across the BSC Season to which the ratio is to apply is the same irrespective of whether HOL (WD/NWD)- and XHOL-CALF (WD/NWD) values were requested or the Seasonal WDCALF and NWDCALF value is applied. Rounding errors may result in slight differences.

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## 6 Trading Units

6.1 When two or more Primary BM Units join together to form a Trading Unit, the Production or Consumption status of the Primary BM Units is normally determined by the overall status of the Trading Unit. If a Trading Unit changes from Production to Consumption status (or vice versa) this could therefore cause some or all of its Primary BM Units to lose or gain Credit Qualifying status, as well as changing whether the GC or DC values of any non-Credit Qualifying Primary BM Units are used in their Credit Cover calculation. Key exceptions are Exempt Export Primary BM Units (who elect whether their P/C Status is Production or Consumption), non-Exempt Export Supplier Primary BM Units (whose P/C Status is fixed as Consumption) and Interconnector Primary BM Units (which are allocated in fixed Production/ Consumption pairs). The P/C Status, and Credit Qualifying status, of these Primary BM Units is unaffected by any changes in their Trading Unit. See Section 3.

## Credit Assessment Load Factors (CALF)

6.2 Under the Credit Cover arrangements, the credit checking process calculates:

- WDBMCAEC/NWDBMCAEC (calculated as  $WDCALF \times GC / NWDCALF \times GC$ ) for non-Interconnector, non-Credit Qualifying, Primary BM Units with a Production P/C Status and an individual Primary BM Unit Relevant Capacity which is greater than zero; and
- WDBMCAIC/NWDBMCAIC (calculated as  $WDCALF \times DC / NWDCALF \times DC$ ) for non-Interconnector, non-Credit Qualifying, Primary BM Units with a Consumption P/C Status, or with a Production P/C Status but an individual Primary BM Unit Relevant Capacity which is less than or equal to zero.

6.3 Demand sites (i.e. Primary BM Units with an individual Relevant Capacity which is less than or equal to zero) in Production Trading Units will have a flag set in BSC Systems indicating that their WDCALF/NWDCALF and DC (WDBMCAIC/NWDBMCAIC) should be used in calculating CEI. There is no reverse provision for non-Exempt Export generation sites in Consumption Trading Units; a WDBMCAIC/ NWDBMCAIC will be calculated for these Primary BM Units based on their  $WDCALF \times DC / NWDCALF \times DC$ .

6.4 To ensure that the credit liability for all Primary BM Units within a Trading Unit is fully taken into account in the calculation of Energy Indebtedness, the credit liability for the Primary BM Unit(s) which would potentially not be taken into account in the calculation is transferred to other Primary BM Units within the Trading Unit, if the Primary BM Units are in common ownership. The treatment of Trading Units where the Primary BM Units are in multiple ownership is addressed in Paragraph 6.5.

6.5 In the case of a Production Trading Unit which includes Primary BM Units that would be regarded as Consumption Units if treated independently, the WDCALF/NWDCALF values for the Production Primary BM Units are calculated after netting off from their average net metered Production, a proportion of the average net metered Consumption of those Consumption Primary BM Units. The proportion to be netted off from each Production Primary BM Unit is calculated pro rata to the maximum metered generation for the Production Primary BM Units in that season. The maximum metered generation for the Production Primary BM Units is not adjusted. The WDCALF/NWDCALF for the Consumption Primary BM Unit should be set to zero as the credit liability has been reallocated to other Primary BM Units. In practice, this latter point has no material impact on the credit calculation if the GC for the Consumption Primary BM Unit is zero. An example is provided in Appendix 3. A similar process is applied to Consumption Trading Units which include some Primary BM Units that would be considered Production if treated independently.

6.6 The netting of Production and Consumption between different Primary BM Units within a Trading Unit is restricted to Trading Units in which all Primary BM Units are in common ownership. However, such netting is inappropriate for a Trading Unit in which the Primary BM Units are owned by different Parties, as it would result in an incorrect assessment of individual Parties' Credit Cover responsibilities. In the situation where Consumption or Production cannot be reallocated within the Trading Unit, it should be reallocated to other Primary BM Units within the Primary BM Unit owner's portfolio. Where this option is also not possible, it is not clear how the credit liability could be taken into account without a modification to the BSC.

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## 7 Commissioning Primary BM Units

7.1 Commissioning Primary BM Units cannot be assigned WDCALF/NWDCALF values as described in Section 4 because there is either no or unrepresentative historic data on which to base the calculation of WDCALF/NWDCALF. New Primary BM Units that have Credit Qualifying status will not be assigned commissioning or a calculated generic CALF value

7.2 Please note that this scenario was out of scope of P326 and as such will not have a Working Day/Non-Working Day distinction. Therefore references to CALF in this section mean the relevant WDCALF or NWDCALF (the values of which are the same value).

7.3 A series of generic CALF values are employed for commissioning Primary BM Units. These have been derived from the performance of a set of other recently commissioned plant. These current values are attached in Appendix 4.

7.4 For the purposes of assigning WDCALF/NWDCALF values to Commissioning plant, it is assumed that a typical Commissioning programme would take place over two years. This two year commissioning schedule is split into eight seasons, each of three months, where the start of commissioning is considered as the first day of metered output. The commissioning seasons may not necessarily align with the standard BSC Seasons. A generic WDCALF/NWDCALF value is assigned to each of the eight commissioning seasons. At the end of Season 8,



## Credit Assessment Load Factors (CALF)

WDCALF/NWDCALF would continue at the Season 8 Level for a further four seasons, subject to the generator maintaining its Season 8 performance.

- 7.5 A newly commissioning generator is assigned a Season 1 generic commissioning WDCALF/NWDCALF value. For each subsequent season, the performance of the generator during the previous three months will be reviewed and a decision made as to whether the generator should move onto the next commissioning season WDCALF/NWDCALF value. For the avoidance of doubt, the last date of the three month period reviewed shall be the most recent date for which metered data is available to Elexon at the time of seasonal WDCALF/NWDCALF calculation.
- 7.6 It is recognised that it may not always be appropriate for a Party to move automatically onto the next commissioning season, in which case, the generator will remain on the same commissioning season. In some cases, it may be appropriate for an earlier season WDCALF/NWDCALF to be assigned.
- 7.7 If a Party feels it is commissioning more rapidly than 8 season profile described above, it should seek a redetermination by the ISG.
- 7.8 There is one generic value for commissioning station load Primary BM Units which form Sole Trading Units, to be applied over all seasons of the commissioning schedule. This is given in Appendix 4.

## Commissioning Trading Units

- 7.9 A Production Trading Unit that contains a commissioning Consumption Primary BM Unit cannot have the demand of the Consumption Primary BM Unit netted from the Production Primary BM Unit(s) (commissioning or non-commissioning) using the procedure outlined above. This is because the CALF of the commissioning Primary BM Unit(s) in the Trading Unit would be a fixed generic value rather than a WDCALF/NWDCALF derived from actual historical metered data.
- 7.10 It is therefore necessary to take the demand of the Consumption Primary BM Unit into account during the assignment of appropriate generic values to the Production Primary BM Unit(s) rather than after. This would require evaluation of the commissioning performance of both the Production and Consumption Primary BM Units in the preceding three-month commissioning season. The net output from the commissioning Primary BM Units would then determine the generic commissioning WDCALF/NWDCALF to be assigned to the Production Primary BM Unit.
- 7.11 The effect of this would be that a commissioning Production Primary BM Unit could be assigned a generic commissioning WDCALF/NWDCALF value applicable to a season lower than that which it is actually in, in order to take into account the demand of the Consumption Primary BM Unit.
- 7.12 WDCALF/NWDCALF for the Consumption Primary BM Unit would be set to zero to reflect the fact that its demand had been accounted for in the credit calculation, as in the standard Trading Unit procedure (see Section 7.6).

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## 8 Pumped Storage

- 8.1 Pumped Storage Primary BM Units generate and consume electricity and therefore, have both a GC and a DC associated with them. The Primary BM Unit will have to purchase more electricity than it generates over a BSC Season (i.e. it will be a net consumer). However, the Primary BM Unit is treated as a Production Primary BM Unit because the magnitude of its GC is greater than its DC.
- 8.2 WDCALF/NWDCALF values for Pumped Storage Primary BM Units are determined from the metered net output of that Primary BM Unit in the equivalent BSC Season of the previous year:

$$WDCALF = \frac{\text{average Primary BM Unit metered net output (WD) for the BSC Season (MWh)}}{\text{maximum Primary BM Unit metered output for (all days) the BSC Season (MWh)}}$$
$$NWDCALF = \frac{\text{average Primary BM Unit metered net output (NWD only) for the BSC Season (MWh)}}{\text{minimum Primary BM Unit metered output for (all days) the BSC Season (MWh)}}$$



## Credit Assessment Load Factors (CALF)

The maximum metered output is defined as the maximum output in any one Settlement Period during that BSC Season. The term output refers to the power supplied by the pumped storage unit to the system. When a pumped storage unit is generating, the output will be positive and when it is pumping, the output will be negative.

- 8.3 Over a BSC Season, the average metered output from a pumped storage unit will typically be a net Consumption (hence, negative) and the maximum metered output over the season will typically be a maximum generation (and hence, positive). This gives rise to a negative value for WDCALF/NWDCALF.
- 8.4 With the Primary BM Unit being considered to be a Production Primary BM Unit, a Balancing Mechanism Credited Assessment Export Capability (WDBMCAEC or NWDBMCAEC) is calculated, using the declared GC and the negative value of the WDCALF or NWDCALF. This gives a negative WDBMCAEC or NWDBMCAEC, reflecting the fact that the Primary BM Unit is a net consumer over the BSC Season.

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## 9 Interconnectors

- 9.1 Following the implementation of [Approved Modification P140](#) on 23 February 2005, the WDBMCAIC, NWDBMCAIC, WDBMCAEC and NWDBMCAEC for each Interconnector Primary BM Unit (including Interconnector Error Administrator Primary BM Units) are based on period FPN rather than GC/DC and WDCALF/NWDCALF. Therefore the WDCALF/NWDCALF is automatically set to zero for Interconnector Primary BM Units.

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## 10 Credit Qualifying Primary BM Units

- 10.1 Following the implementation of [Approved Modification P215](#) on 25 June 2009 and amended by [Approved Modification P394](#)<sup>4</sup> on 27 February 2020, the WDBMCAIC, NWDBMCAIC, WDBMCAEC or NWDBMCAEC for each Credit Qualifying Primary BM Unit is calculated using period FPN and Metered Energy Indebtedness (MEI). WDCALF/NWDCALF, GC and DC values are not used in the Energy Indebtedness calculation for Credit Qualifying Primary BM Units.
- 10.2 Credit Qualifying Primary BM Units must satisfy the following criteria (BSC Section K3.7):
- The Primary BM Unit is obligated to submit FPNs under the Grid Code or has elected to participate in the Balancing Mechanism; and
  - The Primary BM Unit is not an Interconnector Primary BM Unit; and
  - The Primary BM Unit meets one or more of the following additional criteria:
    - It is a Production Primary BM Unit; or
    - It is an Exempt Export Primary BM Unit (regardless of whether its P/C Status is Production or Consumption).
- 10.3 A Primary BM Unit will lose its CQ Primary BM Unit status if the criteria are no longer met as per 10.2. A default WDCALF/NWDCALF value of 0.4000 will be applied to all CQ status Primary BM Units for use on change of status until a WDCALF/NWDCALF value has been calculated according to the Reference Season as per the requirements in Sections 4 and 5. The new WDCALF/NWDCALF value will be applied in 20 Working Days, unless the Party agrees to an earlier effective date.
- 10.4 With respect to WDCALF/NWDCALF values, the Trading Unit methodology will not apply to Trading Units that contain CQ Primary BM Units. The demand sites will not be netted off and will use the WDCALF/NWDCALF and DC to calculate Energy Indebtedness.

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## 11 Exemptable Generating Plant Primary BM Units

- 11.1 Exemptable Generating Plant registered within SMRS will have a WDCALF and NWDCALF value assigned in accordance with the SMRS methodology detailed in Section 5, where the Primary BM Unit associated with the plant does not have Credit Qualifying status (as explained in Section 10).
- 11.2 The Lead Party of an Exempt Export Primary BM Unit must elect whether the Primary BM Unit has Production or Consumption Status under BSC Section K3.5.5. Where an Exempt Export Primary BM Unit submits FPNs, it will

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<sup>4</sup> P394 removed the ability for a BM Unit to be assigned Credit Qualifying Status by the Panel.

## Credit Assessment Load Factors (CALF)

be Credit Qualifying (regardless of its P/C Status) and the initial part of its Credit Cover calculation will be based on these FPNs rather than GC/DC and WDCALF and NWDCALF. See Section 10. The remainder of this Section 11 covers non-Credit Qualifying Exempt Export Primary BM Units.

- 11.3 If the Party selects Production status and the Primary BM Unit's individual Relevant Capacity is >0, WDCALF and NWDCALF for the Primary BM Unit is calculated as described in Section 5 of this document and the BSC Systems will calculate a WDBMCAEC and NWDBMCAEC for the Primary BM Unit using  $WDCALF \times GC$  and  $NWDCALF \times GC$
- 11.4 If the Party selects Consumption status (or it selects Production status but the Primary BM Unit's individual Relevant Capacity is less than or equal to zero), CALF for the Primary BM Unit is calculated as described in Section 6 of this guidance and the BSC Systems will calculate a BMCAIC for the Primary BM Unit using  $CALF \times DC$ .
- 11.5 The rules set out in Section 5.9, which allow a Lead Party of an SVA Registered Exempt Export Primary BM Unit to request the calculation of WDCALF and NWDCALF values using the alternative methodology in Section 5.10, may overcome the issue described in Sections 5.5 and 5.6. Registrants of CVA Registered Exempt Export Primary BM Units can also request the methodology defined in Section 5 to be used for CVA Registered Primary BM Units by completing the application form in Appendix 7.
- 11.6 Under the situation detailed in paragraph 11.5 above, the Lead Party of the Primary BM Unit may perceive that the credit position of the Primary BM Unit is not being addressed correctly. Elexon has sought legal advice regarding its ability to raise a Modification to the BSC to address this issue, and has been advised that it does not have a clear remit to do so. It remains open to a BSC Party to raise a Modification to the BSC on this issue.
- 11.7 If an Exempt Export Primary BM Unit elects Consumption status whilst having declared GC and DC values, it is likely that the average metered demand will be net production (hence, positive) and the maximum metered demand over the season will typically be a maximum consumption (hence, negative). This will give rise to a negative value for WDCALF and NWDCALF. This will result in a positive WDBMCAIC and NWDCALF, reflecting that the Primary BM Unit is a net producer over the season.

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## 12 Requests for Redetermination of an Assigned WDCALF, NWDCALF or SECALF value

- 12.1 The rules in BSC Section M1.5 allow the Lead Party for a Primary BM Unit to request a redetermination of a WDCALF, NWDCALF or SECALF value within two months following any revision to this guidance or notification of a new or revised value (BSC Section M1.5.6). This request should be made by notice to the [bscservicedesk@cgi.com](mailto:bscservicedesk@cgi.com).
- 12.2 The Panel has delegated responsibility to the ISG for hearing any request for a redetermination of a WDCALF/NWDCALF or SECALF value.
- 12.3 The ISG will consider the request, wherever practicable, at its next meeting and will either confirm the prevailing value or determine a new value.
- 12.4 The ISG may re-determine WDCALF, NWDCALF or SECALF value without reference to the prevailing CALF principles and guidance if considered appropriate. However, in order to adopt a robust and consistent approach to judging WDCALF, NWDCALF or SECALF appeals, Elexon maintains a list of precedents on behalf of the ISG.
- 12.5 A Party submitting a WDCALF, NWDCALF or SECALF appeal should complete an appeal form. A copy of the appeal form is included in Appendix 5 of this document for reference purposes. The form provides guidance on the considerations taken into account in WDCALF, NWDCALF or SECALF appeals and the basis on which the appeal will be determined.
- 12.6 Elexon will prepare its own form which will be submitted to ISG, using the information detailed in the Participant's form.
- 12.7 Where the ISG determines new WDCALF, NWDCALF or SECALF values, this will become effective from the third Working Day (or such later day as the ISG may decide) after the meeting at which it was decided.

## Credit Assessment Load Factors (CALF)

- 12.8 Under the current guidelines, a redetermination by the ISG is effective for the duration of the appealed BSC Season; thus a Trading Party is required to make an appeal to the ISG every BSC Season, if the Party deems it necessary.
- 12.9 In certain cases, it may be appropriate for a redetermination by the ISG to apply beyond the BSC Season for which the redetermination was made. Therefore, a redetermination by the ISG may be effective on an ongoing basis, if the ISG so determines. This includes provision for the ISG to review the appropriateness of the decision at any time.
- 12.10 In the event of a change to this guidance or an error being identified, a change to the WDCALF, NWDCALF or SECALF values can be effected but not sooner than 20 Working Days after the CRA and the Trading Party are notified (unless the Trading Party agrees a shorter time). Furthermore, such a change may require the support (and hence a meeting) of the ISG.

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## Appendix 1 – Calculation of Energy Indebtedness

The calculations used to determine a Trading Party's Energy Indebtedness are detailed in [BSC Section M: Credit Cover and Credit Default](#), and [BSC Section P: Energy Contract Volumes and Metered Volume Reallocations](#). This is summarised in the [Credit Cover](#) guidance on the [BSC Website](#).

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## Appendix 2 – Calculation of HOL-WDCALF, HOL-NWDCALF, XHOL-WDCALF and XHOL-NWDCALF for SMRS Registered Primary BM Units

The following equations are used to calculate HOL-WDCALF, HOL-NWDCALF, XHOL-WDCALF and XHOL-NWDCALF values:

For a BSC Season:

- h = number of Settlement Periods in relevant Annual Holiday Period in BSC Season (e.g. 6 over Christmas)  
x = number of Settlement Periods outside the relevant Annual Holiday Period in BSC Season (e.g. 86 in the remainder of the Winter BSC Season)

### HOL-Ratio is defined in Section 5

Then:

$$HOL\ WDCALF = WDCALF * HOLratio$$

$$HOL\ NWDCALF = NWDCALF * HOLratio$$

$$XHOL\ WDCALF = \frac{((h + x) * WDCALF) - (h * HOL\ WDCALF)}{x}$$

$$XHOL\ NWDCALF = \frac{((h + x) * NWDCALF) - (h * HOL\ NWDCALF)}{x}$$

## Appendix 3 – Example Trading Unit Calculations

### Production Trading Unit

The following provides an example of how CALF values are calculated for the Primary BM Units in a Production Trading Unit (where there are no Primary BM Units with Credit Qualifying status). Therefore references to CALF in this section mean the relevant WDCALF or NWDCALF (the values of which are the same).

Example: Power Station A contains 2 Production and 1 Consumption Primary BM Units. The CALF values assigned to these Units if they are treated on an individual basis are shown in Table 1.

**Table 1**

Primary BM Unit ID	GC	DC	Type	Average Net Generation or Demand (MWh)	Maximum Generation or Demand (MWh)	Individual CALF
Primary BM Unit 1	400	0	Production	150	170	0.8824
Primary BM Unit 2	400	0	Production	150	190	0.7895
Primary BM Unit 3	0	-50	Consumption	-35	-45	0.7777

If the same three Primary BM Units are treated as a Production Trading Unit, the average demand of the Consumption Primary BM Unit is netted against the average Production of the Production Primary BM Units. The amount of demand to be netted against each Production Primary BM Unit is determined by the ratio of the maximum generation of each Primary BM Unit, as shown in Table 2.

The CALF value for the Production Primary BM Units is then determined from:

$$CALF = \frac{(average\ net\ Generation) + (proportion\ of\ average\ Station\ Demand)}{maximum\ Generation}$$

**Table 2**

Primary BM Unit ID	Ratio of Maximum Generation	Amount of Demand to be netted	Netted Average Generation	CALF Value
Primary BM Unit 1	=170/360 = 0.4722	=0.4722 x (-35) = (-16.527)	= 150 + (-16.555) = 133.445	=133.445/170 = 0.7850
Primary BM Unit 2	=190/360 = 0.5277	= 0.5277 x (-35) = (-18.470)	=150 + (-20.020) =129.980	=129.980/190 = 0.6841
Primary BM Unit 3	-	-	-	0

CALF for the Consumption Primary BM Unit is set to Zero to reflect the fact that its demand has been accounted for.

### Appendix 4 – CALF values for Commissioning Plant

#### Generators

Generic WDCALF/NWDCALF values for the standard Generator Commissioning Profile are derived from historic data from 34 generators which have commissioned since 1994. WDCALF/NWDCALF values for each generator were calculated from the average generation over each commissioning season and GC/2 for that unit (halving GC to reflect the half hour Settlement Period). GC is used in the calculation to avoid obtaining high and unrepresentative WDCALF/NWDCALF values which are inconsistent with the actual Production when applied to the actual GC.

$$WDCALF/NWDCALF = \frac{\text{average generation for the commissioning season (MWh)}}{0.5 \times \text{Declared Generation Capacity}}$$

After removal of outlying data from the set of WDCALF/NWDCALF values, the average WDCALF/NWDCALF for each commissioning season was calculated. These values form the set of generic values to be assigned to all future commissioning generators.

The values derived for Commissioning generators are shown in Table 3.

Commissioning Season	WDCALF/NWDCALF
1	0.0936
2	0.3581
3	0.6500
4	0.6500
5	0.6500
6	0.7866

(These values have been revised from those presented in Paper 13/011).

#### Station Load

A single WDCALF/NWDCALF value of 0.0664 will be applied to commissioning station load Primary BM Units which are Sole Trading Units. The data used to obtain this value has been sourced from five data sets.

### Appendix 5 – Form for Requesting a Redetermination of a WDCALF, NWDCALF or SECALF value

#### General information on the Appeals Process

##### Introduction

BSC Parties should complete this form if they wish the Credit Assessment Load Factor (WDCALF/NWDCALF) or Supplier Export CALF (SECALF) value calculated by BSCCo for any of their Primary BM Units be re-determined. The form should be completed in full. If assistance with completing particular sections or further information on CALF is required, Parties should contact the BSC Service Desk: [bscservicedesk@cgi.com](mailto:bscservicedesk@cgi.com); 0370 010 6950.

The following paragraphs in this section give some high-level information about the WDCALF, NWDCALF or SECALF appeals process.

## Credit Assessment Load Factors (CALF)

### WDCALF, NWDCALF and SECALF Methodology

BSC Section M1.5 requires the BSC Panel to establish, and provide to Elexon and all Parties, principles and guidance as to the basis on which WDCALF/NWDCALF or SECALF values are to be assigned to different types of Primary BM Units. Elexon is required to determine and notify the WDCALF, NWDCALF or SECALF value to be assigned to each Primary BM Unit from time to time. The Panel has delegated responsibility to the ISG to establish and periodically revise the principles and guidance, and to consider individual requests for redetermination.

The WDCALF, NWDCALF or SECALF value assigned to each Primary BM Unit will be determined in accordance with the prevailing CALF guidelines as agreed by the ISG and set out in the latest version of this guidance.

### Calculation and Publication of WDCALF, NWDCALF or SECALF values

Elexon calculates WDCALF, NWDCALF or SECALF values which are valid for three-month periods corresponding to the BSC Seasons: commencing 1 March (Spring), 1 June (Summer), 1 September (Autumn) and 1 December (Winter). Elexon endeavours to calculate WDCALF, NWDCALF or SECALF values at least two months in advance of the start of each BSC Season. WDCALF, NWDCALF or SECALF values are published on the Credit/Credit Alerting page of the Financial and Credit section of the Elexon Portal ([www.elexonportal.co.uk](http://www.elexonportal.co.uk)).

### Appeal of Assigned WDCALF, NWDCALF or SECALF values

BSC Section M1.5.6 makes provision for the Lead Party of each Primary BM Unit to request a redetermination of the WDCALF, NWDCALF or SECALF value assigned to it. This request must take place within two months of the date upon which it has been notified of new or revised values, and should be lodged via the BSC Service Desk: [bscservicedesk@cgi.com](mailto:bscservicedesk@cgi.com); 0370 010 6950.

Subsequent to a request for redetermination being received, Elexon will seek to gather information necessary for the ISG to determine whether the currently-assigned WDCALF, NWDCALF or SECALF value should be amended. Elexon will then prepare and present an appeal to the ISG on the Party's behalf. The ISG will determine whether the assigned WDCALF, NWDCALF or SECALF value(s) should be revised, and if so, to what value(s).

BSC Section M1.5.4 obliges the appellant Party to provide Elexon with such information as it may reasonably request for the purposes of determining a revised WDCALF, NWDCALF or SECALF value. In practice, Elexon will look for the appealing Party to provide both reasons as to why the currently assigned WDCALF, NWDCALF or SECALF value(s) is inappropriate, and one or more suggestions as to an appropriate basis for revised value(s). Appropriate relevant background data to justify each suggested alternative should also be provided where requested by Elexon.

### Timetable for Processing Appeals

Wherever possible, appeals will be heard by ISG and any agreed revised WDCALF, NWDCALF or SECALF values will be assigned before the start of the BSC Season to which they apply. To achieve this, Parties are required to:

- Submit the attached form (fully completed) to the BSC Service Desk: [bscservicedesk@cgi.com](mailto:bscservicedesk@cgi.com); 0370 010 6950 at least three weeks before the date of the last ISG meeting to occur before the start of the BSC Season (a timetable of ISG meetings is published on the BSC Website at: [Imbalance Settlement Group \(ISG\)](#))
- Ensure that the person submitting the form (or a suitable alternative contact) can respond to any Elexon requests for clarification/elaboration in the period before the ISG meeting.

Parties wishing to appeal WDCALF, NWDCALF or SECALF values should submit the attached form to Elexon at the earliest opportunity. Where the above requirements are not met, Elexon will exercise reasonable endeavours to process the appeal before the start of the BSC Season. However, this cannot be guaranteed.



## Credit Assessment Load Factors (CALF)

### What Happens after the Appeal?

BSCCo will contact the person named on the Party's form to inform the Party of the outcome of the appeal.

Any revised values agreed by the ISG will become effective on the first day of the relevant BSC Season or (where this is later) the third Working Day following the ISG's decision.

### Guidance on Completing the Form (Section II)

The following notes give instructions regarding the completion of each part of the form in Section II:

#### Party Contacts

Parties should provide details of contact persons within their organisation who will be able to answer any queries from Elexon during preparation of the appeal and who should be contacted to notify its outcome.

#### Primary BM Unit(s) being Appealed

Parties should copy this table as required for each separate Lead Party and/ or Trading Units for which Primary BM Unit(s) are being appealed.

In the GC and DC columns, Parties should state the GC and DC values they plan to submit for the Season being appealed.

In the "Reason for appealing assigned WDCALF, NWDCALF or SECALF values" column, Parties should explain in detail why they believe the WDCALF, NWDCALF or SECALF value calculated by ELEXON will not accurately reflect the expected load factor for the forthcoming BSC Season. WDCALF, NWDCALF or SECALF values calculated by Elexon are generally based on the actual load factor (or similar) achieved in the equivalent BSC Season during the previous year or, where suitable data is not available, a specified generic value. Parties should provide an explanation of why the basis of the calculated WDCALF, NWDCALF or SECALF value is not considered appropriate. For a detailed explanation of the WDCALF, NWDCALF or SECALF calculation applied by Elexon to each Primary BM Unit, please refer to the appropriate Section of this guidance.

### Outages

#### a) Forthcoming planned outages

Please provide details of any outages planned for the BSC Season being appealed. If there are separate outage periods when a given Primary BM Unit will be operating at different average loads, please state each period on a separate line.

In the column "Average % Volume during Outage", if the outage is a full outage, put 0. If, for example, Primary BM Units will be operating at half typical load, put 50%.

#### b) Historic

Please provide details as in 3a), but for the historic BSC Seasons or other periods which form the proposed basis for calculation of the revised WDCALF, NWDCALF or SECALF value.

For the purposes of WDCALF, NWDCALF or SECALF appeals processes, an outage is said to be **planned** if the Lead Party intended the Primary BM Unit to be on outage for the specified period prior to the start of that BSC Season.



## Credit Assessment Load Factors (CALF)

For the avoidance of doubt, the outage is **unplanned**:

- If it was due to an unexpected plant failure or otherwise planned after the start of the BSC Season in which it occurred;
- To the extent that a Primary BM Unit operated at a lower average load during the outage than was planned; or
- If the outage is an unplanned extension of a planned outage.

Please provide this information for:

- i. The equivalent BSC Season in the previous year; and
- ii. If applicable, another BSC Season or other historic period recommended by the Party as the basis of revising WDCALF, NWDCALF or SECALF values in part 2.

## Proposed CALF/SECALF Values

For each Primary BM Unit, Parties should state the WDCALF, NWDCALF or SECALF values they propose would be representative of the relevant BSC Season.

The data set on which the proposed value is based should be stated, for example:

- CDCA data for a particular BSC Season; or
- A detailed production schedule/ forecast for the BSC Season being appealed.

The calculation that has been applied to derive a WDCALF, NWDCALF or SECALF value from this data should be specified in sufficient and unambiguous detail such that it can be replicated by Elexon and the ISG.

Parties should state the reasons why they believe that the use of this data set is likely to be more reflective of Primary BM Unit performance in the Season being appealed.

Where the proposed value is based on data that is not centrally held by Elexon, Parties should enter “Y” in the column “Base data appended?” and attach the base data in a Microsoft Excel Workbook with their submission.

Where the proposed value is based on CDCA data, Elexon will calculate a WDCALF, NWDCALF or SECALF value based on the data set specified by the Party and will submit this as part of its recommendations to ISG on behalf of the appellant. However, the Party is requested to state the WDCALF, NWDCALF or SECALF value it believes would be yielded by the proposed method by way of providing a degree of validation. Should there be (significant) discrepancies between the Party’s proposal and Elexon’s calculation, Elexon will contact the Party to discuss the source of the discrepancy.

For Primary BM Units in common-ownership Trading Units, a methodology is specified in this guidance to modify the WDCALF, NWDCALF or SECALF values that would be assigned if these were Sole Trading Unit Primary BM Units. Please state in the Table whether the Trading Unit methodology has been applied in your submission. (If the Primary BM Unit is a Sole Trading Unit or is in a Trading Unit not in common ownership, put N/A.)

Parties may submit alternative proposals, in order of preference. Where a suitable option exists it may be desirable for Parties to propose a value based on an alternative CDCA data set (e.g. a different BSC Season from that being used in the standard calculation), as ISG decisions have frequently shown a preference to base revised values on centrally-held data.

## Previous Appeals

Please list in this table each BSC Season for which your Party has previously appealed WDCALF, NWDCALF or SECALF values, and for which Primary BM Units.

## Additional Remarks

This part should be completed if there is any additional information you wish to raise in relation to the WDCALF, NWDCALF or SECALF appeal which has not been covered by the preceding parts of the form.

## Credit Assessment Load Factors (CALF)

### Section II: Request for redetermination of WDCALF, NWDCALF or SECALF value(s)

All parts of this form must be completed. Parties should submit Section II to the BSC Service Desk: [bscservicedesk@cqi.com](mailto:bscservicedesk@cqi.com); 0370 010 6950. Parties should note the timescales outlined in Section 16A, Paragraph 5, above.

<b>WDCALF, NWDCALF or SECALF Appeal Reference (To be assigned by Elexon)</b>	
--	--

<b>BSC Season for which WDCALF, NWDCALF or SECALF values are being appealed</b>	
---	--

#### 1. Party contacts

Contact 1:		Contact 2: (if applicable)	
Name		Name	
Phone		Phone	
Email		Email	

#### 2. Primary BM Unit(s) being appealed

<b>Lead Party name:</b>			
Trading Unit name (state N/A if Sole Trading Unit or Base Trading Unit):			
Primary BM Unit IDs:	GC (MW)	DC (MW)	Reason for appealing assigned WDCALF, NWDCALF or SECALF values:
[add more rows if necessary; copy table for other Trading Units as required]			

#### 3. Outages

##### a) Forthcoming planned outages for appealed BSC Season

Primary BM Unit IDs	Outage First Date	Outage Last Date	Average % Volume during Outage
---------------------	-------------------	------------------	--------------------------------

## Credit Assessment Load Factors (CALF)

[add more rows if necessary]			

### b) Historic

#### i. Equivalent BSC Season in previous year

<b>BSC Season Dates:</b>	
--------------------------	--

Primary BM Unit IDs	Outage First Date	Outage Last Date	Average % Volume during Outage
<b>Planned outages</b>			
[add more rows if necessary]			
<b>Unplanned outages</b>			
[add more rows if necessary]			

#### ii. Any other BSC Seasons or historic periods, which are recommended by the Party as the basis on which WDCALF, NWDCALF or SECALF values should be recalculated in part 2 (if applicable).

<b>BSC Season/ Reference Period Dates:</b>	
--	--

Primary BM Unit IDs	Outage First Date	Outage Last Date	Average % Volume during Outage
<b>Planned outages</b>			

## Credit Assessment Load Factors (CALF)

[add more rows if necessary]			
<b>Unplanned outages</b>			
[add more rows if necessary]			

### 4. Proposed CALF/SECALF Values

#### Proposal 1

Primary BM Unit ID	Proposed WDCALF, NWDCALF or SECALF value	Detailed basis of proposed calculation	Base data appended?	Approve provision of base data to ISG?	Planned Outages factored?	TU calculation applied?
[add more rows if required]						

#### Proposal 2 (if applicable)

Primary BM Unit ID	Proposed WDCALF, NWDCALF or SECALF value	Detailed basis of proposed calculation	Base data appended?	Approve provision of base data to ISG?	Planned Outages factored?	TU calculation applied?
[add more rows if required]						

#### Proposal 3 (if applicable)

Primary BM Unit ID	Proposed WDCALF, NWDCALF or SECALF value	Detailed basis of proposed calculation	Base data appended?	Approve provision of base data to ISG?	Planned Outages factored?	TU calculation applied?

## Credit Assessment Load Factors (CALF)

[add more rows if required]						

### 5. Previous Appeals

Please state any Primary BM Units which have been previously appealed, and for which BSC Seasons.

BSC Season appealed	Primary BM Units appealed
[add more rows if required]	

### Additional Remarks

--

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## Appendix 6 – Appeal of Assigned WDCALF, NWDCALF or SECALF – Form for Completion by Elexon

Information shaded grey has been copied from the participant form.

<b>WDCALF, NWDCALF or SECALF Appeal Reference</b>	
---	--

### 1. Elexon contact information for this appeal

<b>Name</b>	
<b>Phone Number</b>	

### 2. Key dates

Event	Details
BSC Season being appealed	

## Credit Assessment Load Factors (CALF)

Date of Publication of WDCALF, NWDCALF or SECALF Values on Elexon Portal	
Date of Notice of intention to appeal logged with BSC Service Desk	
Date Completed Form received from Party	

### 3. Primary BM Unit details and standing data

Trading Unit Name:				
Primary BM Unit ID	Currently assigned WDCALF, NWDCALF or SECALF Value	P/C Status based on planned submission	GC (MW) to be submitted for Season being appealed	DC (MW) to be submitted for Season being appealed
Primary BM Units being appealed				
[Add more rows if required]				
Trading Unit Name:				
Primary BM Units being appealed				
[Add more rows if required]				

### 4. Rationale for bringing WDCALF, NWDCALF or SECALF Appeal

Primary BM Unit ID	Code	Notes

Credit Assessment Load Factors (CALF)

[insert more rows if required]
--------------------------------



## Credit Assessment Load Factors (CALF)

### 5. Performance of Primary BM Units against standing data

(Primary BM Unit ID)									
BSC Season and Year	Appeal Code	WDCALF, NWDCALF or SECALF				Metered Volume		GC	Trading Unit Name
		Initially Assigned	Requested	After Appeal	Achieved	Average	Maximum		
(Latest Year's Data)									
(Previous Appeals)									
[add more rows as necessary]									

[Repeat for further Primary BM Units]

### 6. Revised WDCALF, NWDCALF or SECALF values proposed

All options are after the application of Trading Unit methodology, where applicable

#### Proposal 1

Primary BM Unit ID	Proposed WDCALF, NWDCALF or SECALF value	Detailed basis of proposed calculation	Assumed Average volume or equivalent, where applicable (MWh)	Assumed Maximum volume or equivalent, where applicable (MWh)	Base data appended?	Planned Outages in appealed BSC Season accounted for?
[add more rows if required]						

## Credit Assessment Load Factors (CALF)

### Proposal 2 (if applicable)

Primary BM Unit ID	Proposed WDCALF, NWDALF or SECALF value	Detailed basis of proposed calculation	Assumed Average volume or equivalent, where applicable (MWh)	Assumed Maximum volume or equivalent, where applicable (MWh)	Base data appended?	Outages in appealed BSC Season accounted for?
[add more rows if required]						

### Proposal 3 (if applicable)

Primary BM Unit ID	Proposed WDCALF, NWDALF or SECALF value	Detailed basis of proposed calculation	Assumed Average volume or equivalent, where applicable (MWh))	Assumed Maximum volume or equivalent, where applicable (MWh)	Base data appended?	Outages in appealed BSC Season accounted for?
[add more rows if required]						

## Credit Assessment Load Factors (CALF)

### Notes

### Summary of recommendations

Primary BM Unit ID	Proposal 1	Proposal 2	Proposal 3
[insert additional rows if required]			

## Appendix 7 – Application to Request Alternative Methodology for Supplier Primary BM Units or Exempt Export Primary BM Units with Embedded Generation

All parts of this form must be completed. Parties should submit to the **BSC Service Desk**: [bscservicedesk@cgi.com](mailto:bscservicedesk@cgi.com).

<b>Party Details</b>	
<b>BSC Party ID</b>	
<b>Authorised Signatory Name</b>	
<b>Signature</b>	
<b>Contact Telephone Number</b>	
<b>Contact Email Address</b>	
<b>Secondary Contact Name</b>	
<b>Secondary Contact Telephone Number</b>	
<b>Secondary Contact Email Address</b>	

### BSC Season Details

Spring ☐  
Summer ☐  
Autumn ☐  
Winter ☐

Tick/Select Season Requested

## Credit Assessment Load Factors (CALF)

<b>Primary BM Unit Details</b>				
<b>Primary BM Unit ID</b>	<b>Generation Capacity (MW)<sup>5</sup></b>	<b>Demand Capacity (MW)</b>	<b>Current P/C Status of Primary BM Unit<sup>6</sup></b>	<b>Trading Unit ID</b>

## Appendix 8 – Abbreviations

BMCAEC	Balancing Mechanism Credit Assessment Export Capability
BMCAIC	Balancing Mechanism Credit Assessment Import Capability
QABC	Account Bilateral Contract Volume
CALF	Credit Assessment Load Factor
CAP	Credit Assessment Price
CAQCE	Credit Assessment Credited Energy Volume
CC <sub>P</sub>	Credit Cover
CCP <sub>Pj</sub>	Credit Cover Percentage
CEI <sub>Pj</sub>	Credit Assessment Energy Indebtedness
CMRS	Central Meter Registration Service
CQ	Credit Qualifying
CRA	Central Registration Agent
DC	Demand Capacity
ECC <sub>P</sub>	Energy Credit Cover
EI <sub>Pj</sub>	Energy Indebtedness
FPN	Final Physical Notification
GC	Generation Capacity
GSP	Grid Supply Point
HH	Half Hourly
MW	Megawatts
MWh	Megawatt hours
NHH	Non Half Hourly
NWDBMCAEC	Non-Working Day Balancing Mechanism Credit Assessment Export Capability
NWDBMCAIC	Non-Working Day Balancing Mechanism Credit Assessment Import Capability

<sup>5</sup> Generation and Demand Capacities must be provided in MW and not MWh

<sup>6</sup> P/C Status of the BM Unit is the Production or Consumption Status of the BM Unit

## Credit Assessment Load Factors (CALF)

NWDCALF	Non-Working Day Credit Assessment Load Factor
Primary BM Unit	Primary Balancing Mechanism Unit
QM <sub>ij</sub>	Primary BM Unit Metered Volume
SECALF	Supplier Export Credit Assessment Load Factor
SMRS	Supplier Meter Registration Service
SPD	Settlement Period Duration
WDBMCAEC	Working Day Balancing Mechanism Credit Assessment Export Capability
WDBMCAIC	Working Day Balancing Mechanism Credit Assessment Import Capability
WDCALF	Working Day Credit Assessment Load Factor

## Appendix 9 – Amendment Record

Version	Date	Reason for review	Approver
2.0	03/10/02	Document incorporating ISG comments	ISG
3.0	30/12/02	Document incorporating ISG agreed clarification of Exemptable Generating Plant methodologies	ISG
4.0	31/01/03	Document incorporating ISG comments	ISG
5.0	22/04/03	Document incorporating ISG comments	ISG
6.0	01/11/03	Issued for use	ISG
7.0	16/12/03	Issued for use	ISG
8.0	31/03/04	Document incorporating new Appeals pro formas for ISG comment	ISG
9.0	02/11/04	Issued for use	ISG
10.0	05/04/05	Issued for use	ISG
11.0	24/05/06	Issued for use	ISG
12.0	01/08/06	Issued for use	ISG
13.0	30/04/07	Issued for use	ISG
14.0	13/02/08	Issued for use	ISG
15.0	24/02/09	To incorporate changes as per implications of P215 on CALF guidance	ISG
16.0	18/12/12	Transferred to new template, rebadged & hyperlinks updated. Updated to reflect changes in P/C Status rules following implementation of P268 and P269. Clarifications and style changes made for improved readability. Changes to calculation for Supplier Primary BM Units with embedded generation.	ISG140/04
17.0	07/11/13	Rebranding of BSC Service Desk from Logica to CGI	
18.0	25/06/15	Updated to reflect introduction of SECALF and generic SECALF for P310	ISG169/01
19.0	25/02/16	Updated generic SECALF process	ISG178/01
20.0	01/06/16	Updated to generic SECALF Values	ISG181/02
21.0	24/01/16	Updated to reflected P326 changes; and further clarification regarding the Appeals calculations	ISG190/01 ISG191/09
22.0	01/06/17	New Generic SECALF Values	ISG194/04
23.0	06/06/18	New Generic SECALF Values and changes to BSC Service Desk Telephone Number	ISG205/01
24.0	28/02/19	Updated to reflect changes following implementation of P344	ISG214/06
25.0	21/05/19	New Generic SECALF Values	ISG217/01
26.0	27/02/20	Updated to reflect changes following implementation of P394	ISG225/02
27.0	11/05/20	Annual Review of SECALF Values	ISG229/01
28.0	04/05/21	Annual Review of SECALF Values	ISG241/01
29.0	01/02/22	Updated to allow T_ Consumption BM Units to raise Holiday CALF appeals	ISG250/01
<a href="#">29.1</a>	<a href="#">05/04/22</a>	<a href="#">Annual Review of SECALF Values</a>	

## Need more information?

For more information please contact the **BSC Service Desk** at [bscservicedesk@cgi.com](mailto:bscservicedesk@cgi.com) or call **0370 010 6950**.

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