Generation Capacity (GC) and Demand Capacity (DC) Estimation Methodology and Challenge Guidance

Summary:

This document gives effect to two requirements in Balancing and Settlement Code (BSC) Section K 'Classification and Registration of Metering Systems and BM Units: K3.4.7E which requires that the Panel establishes and maintains a 'BM Unit Volume Estimation Methodology' and K3.4.7L which requires that the Panel establishes 'GC or DC Estimation Challenge Guidance'. Therefore, this document includes:

- An explanation of GC/DC and Modification P359
- The methodology that CRA uses to calculate CRA-Estimated GC or DC Amounts for Balancing Mechanism (BM) Units following a GC/DC Breach
- A summary of the process Lead Parties may use to challenge a CRA-Estimated GC or DC Amounts
- The information that should be provided when challenging a CRA-Estimated GC or DC Amount

What are GC and DC?

GC and DC are estimates of the Settlement Period maximum demand and generation capacity for a BM Unit in a BSC Season. GC and DC values are used in the calculation of Parties' (if applicable) Credit Assessment Energy Indebtedness (CEI) and Credit Cover Percentage (CCP). Accurate values of GC and DC are essential to ensure the accurate calculation of CCP and CEI.

In accordance with Section K and BSCP15 'BM Unit Registration', a BM Unit's DC and GC values are derived, respectively, using the Lead Party's forecast of expected maximum magnitude of negative (indicating Demand) and positive (indicating Generation) BM Unit Metered Volumes for a single Settlement Period in the forthcoming or prevailing BSC Season. The Central Registration Agent (CRA) divides the half-hourly (HH) BM Unit Metered Volumes by the Settlement Period Duration (SPD) to convert from MWh to a MW GC or DC.

In accordance with Section K3.4.2, Lead Parties must ensure that the maximum positive and negative Qmij are updated ahead of each new BSC Season and during the BSC Season if the Lead Party becomes aware of, or believes, that there will be a GC/DC breach.

Modification P359

P359 'Mechanised process for GC/DC declarations' was raised to address a concern that the current arrangements for re-declaring Generation Capacity (GC) and Demand Capacity (DC) values, using estimates of BM Unit Metered Volumes provided by the Lead Party, are ambiguous and resulting in low levels and/or inaccurate re-declared values. Failure to re-declare can result in underestimated Credit Cover requirements. This can increase the risk of non-defaulting Parties paying Default Funding

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Shares, should a Party not lodge sufficient Credit Cover (e.g. because their DC and Credit Cover Percentage (CCP) are understated) and then enter Payment Default.

P359 implements automated monitoring of GC/DC Breaches and estimation of replacement GC/DC values. To calculate if there has been a GC/DC breach, the CRA will search through the current BSC Season's BM Unit Metered Volumes (QMij) (excluding Secondary BM Units).

For every Settlement Period in the current BSC Season, the CRA converts the BM Unit Metered Volumes (QMij) (MWh) into a capacity value (MW) by dividing the QM_{ij} by the Settlement Period duration (0.5).

For each BM Unit, the CRA compares the capacity values with the values of GC and DC held by the CRA for the current BSC Season for all BM Units (excluding Secondary BM Units). If a positive MW capacity exceeds the current declared GC value by more than the GC Limit or a negative MW capacity exceeds the declared DC by the DC Limit, this will be treated as a GC/DC breach. The current GC/DC Limits can be found on the GC/DC webpage.

The CRA will check for breaches periodically at ELEXON's discretion, but will endeavour to check at least weekly. The checks will not be performed during the first five working days of a BSC Season because BM Unit Metered Data is not available for CRA to review until the II Settlement Run, which takes place approximately 5WD after a Settlement Day. The checks will also not be performed during the last five working days of the BSC Season, so any CRA value or ELEXON value determined as part of an upheld challenge does not take effect in the next BSC Season or affect the application of a new Party-declared GC or DC value due to take effect in the next BSC Season.

When performing the checks, the CRA will use BM Unit Metered Data from the latest Settlement Run for each Settlement Day. The earliest Settlement Run that will be used for the checks is the II Settlement Run. For example, if on a particular Settlement Day, no GC/DC breach was detected at the II Settlement Run, it would still be possible to trigger a GC/DC breach for that Settlement Day a month later, if the BM Unit Metered Volumes had changed significantly at the SF or R1 Settlement Run.

BM Unit Volume Estimation Methodology

This section sets out the BM Unit Volume Estimation Methodology, which the CRA uses to produce the CRA-Estimated GC or DC Amounts.

If CRA identifies a GC/DC breach, it will produce a CRA-Estimated GC or DC Amount based on BM Unit Metered Volumes from the current BSC Season and the corresponding BSC Season from the previous year. The method for estimating values of QMij is:

- To calculate GC for a particular BM Unit and a 'relevant' BSC Season, determine the positive value of QMij with maximum magnitude from all available, latest historical values of QMij for that BM Unit from the current BSC Season and the corresponding BSC Season 12 months earlier;

- To calculate DC for a particular BM Unit and a 'relevant' BSC Season, determine the negative value of QMij with maximum magnitude from all available, latest historical values of QMij for that BM Unit from the current BSC Season and the corresponding BSC Season 12 months earlier.

For example, if the CRA identifies a GC/DC Breach during the Spring 2019 BSC Season. The CRA-Estimated GC or DC Amount will be calculated based on a Metered Volume from either the Spring 2018 BSC Season **or** Spring 2019 BSC Season. The Metered Volume to be used for the CRA-Estimated GC or DC Amount is that which most exceeded the GC or DC by the GC or DC Limits.

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GC or DC Estimation Challenge Guidance

When a revised GC/DC value has been calculated following a GC/DC breach, the Lead Party's Category F Authorised Person will be notified of the breach and the revised GC/DC value, which will be effective from the next Working Day. If no category F Authorised Person exists, the notification will be sent to a Category A Authorised Person.

From midnight of the Working Day following the notification, the Lead Party will have **two Working Days** to challenge the CRA-Estimated GC or DC Amount if they believe it is incorrect (a GC or DC Estimation Challenge).The process for challenging a CRA-Estimated GC or DC Amount is set out in BSCP15 'BM Unit Registration' and instructions will be provided in the breach notification.

When challenging a CRA-Estimated GC or DC Amount, the Lead Party is claiming material doubt on the newly calculated GC/DC value. Consequently, much of the GC/DC estimation challenge guidance reflects that which is outlined in Section M: Credit Cover and Credit Default and the Material Doubt Section M Guidance Note

The GC or DC Estimation Challenge process is separate to the Material Doubt process related to Credit. Challenging a CRA-Estimated GC or DC Amount doesn't mean the calculated value is suspended in its use for credit purposes. Therefore, it is recommended that a Lead Party also raise Material Doubt in relation to Credit if raising a GC or DC Estimation Challenge.

The Lead Party must state why they believe the CRA-Estimated GC or DC Amount is incorrect and provide sufficient evidence to support their appeal. A Lead Party may only submit a GC or DC Estimation Challenge in two circumstances:

i) if the CRA has not followed the method for estimating QM_{ij} correctly (a System Error)

ii) if the Settlement Data used by CRA to estimate QM_{ij} is incorrect (a Settlement Data Error).

It is not possible to provide an exhaustive list of all specific situations that may give rise to a "system error" or a "Settlement data error".

System Error

A system error is an issue related to the systems maintained and managed by the CRA that calculate the CRA-Estimated GC or DC Amounts. This includes, but is not limited to:

- The database that maintains Settlement Data information
- The software that calculates the CRA-Estimated GC or DC Amounts

If a Lead Party believes there is a system error, they should challenge the CRA-Estimated GC or DC Amount which has resulted in an incorrect estimate of QMij. If ELEXON becomes aware of a system error, an ELEXON Circular will be distributed, detailing the system error and what affected Parties should do in response.

Settlement Data Error

For the purpose of this document, a Settlement data error relates to instances where the Lead Party believes that some or all of their Settlement data (i.e. BM Unit Metered Volumes) are incorrect.

Examples of root causes for Settlement data error include:

- Incorrect Settlement data processed by BSC Agents (e.g. CDCA, SVAA)

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- Incorrect Settlement data processed by Supplier Agents (e.g. Data Collector (DC), Data Aggregator (DA), Meter Operator Agent (MOA), etc.)
- A Half Hourly (HH) metered site experiencing communications failures in relation to retrieving metered data
- A site holding incorrect Meter Technical Details

If a Lead Party challenges a revised GC/DC value, informing ELEXON that they believe the Settlement data is incorrect, they will need to provide the following as part of their challenge:

- A proposed estimate of alternative BM Unit Metered Volumes for any breaching Settlement Periods
- An explanation for why they believe the Settlement data is incorrect, including evidence to support the challenge, which may include, but is not limited to, the following:
    - Correspondence between the Lead Party and agents identifying an issue
    - Data or analysis that demonstrates Settlement data error
- A declaration of when the Lead Party anticipates the Settlement data error to be resolved by. This should be declared from the perspective of future Settlement Runs. For example, if there are BM Unit Metered Volumes that are incorrect at the II Settlement Run, the Lead Party should declare whether the error will be resolved by the later SF or R1 Settlement Run for the affected Settlement Day/s.

ELEXON's Response to a GC/DC Estimation Challenge

Upon being notified of a challenge of a calculated GC/DC value, ELEXON will have **two Working Days** to consider the appeal and provide a final decision to the Lead Party as to whether their appeal is upheld or rejected. During this two Working Day period, ELEXON may contact the Lead Party to discuss the appeal in more detail. This could involve asking for further evidence, or clarification on evidence provided.

If a challenge is 'upheld', ELEXON will submit a new GC/DC value, which will be based on ELEXON's consideration of any analysis or evidence provided by the Lead Party, or any other mitigating factors.

If a challenge is 'rejected', the CRA-Estimated GC or DC Amount will remain as is.

In accordance with BSCP15 'BM Unit Registration' Section 3.9, If ELEXON upholds a GC or DC Estimation Challenge, any resultant decrease to the magnitude of the DC of a Supplier BM Unit will not count towards the two permitted downwards mid-season changes to the DC, as specified in Section K3.4.2A.

Disclaimer

ELEXON has, and retains, ultimate discretion as to whether a Lead Party's challenge of a revised GC/DC is upheld (supported) or rejected and for deciding any GC/DC value to be entered following the outcome of a challenge. ELEXON will act fairly and consistently in applying the principles outlined in this document. In the event of an inconsistency between the information contained in this document and the BSC, the BSC will prevail.

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Further Information

For more information please contact the **BSC Service Desk** at bscservicedesk@cgi.com or call **0370 010 6950**.

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