

Balancing and Settlement Code

**Demand Capacity and Generation Capacity Limit Review and
Determination**

Version 2.0

Effective Date: 28 February 2019

**Demand Capacity and Generation Capacity Limit Review and
Determination**

relating to

**BSC Panel approved principles and processes for the review and
determination of Demand Capacity and Generation Capacity limits**

1. Version 2.0 is effective from 28 February 2019.
2. This document sets out the principles and processes for reviewing and determining Demand Capacity and Generation Capacity Limits.
3. The BSC Panel approved this document and delegated responsibility for it to the Imbalance Settlement Group (ISG).

Intellectual Property Rights, Copyright and Disclaimer

The copyright and other intellectual property rights in this document are vested in ELEXON or appear with the consent of the copyright owner. These materials are made available for you for the purposes of your participation in the electricity industry. If you have an interest in the electricity industry, you may view, download, copy, distribute, modify, transmit, publish, sell or create derivative works (in whatever format) from this document or in other cases use for personal academic or other non-commercial purposes. All copyright and other proprietary notices contained in the document must be retained on any copy you make.

All other rights of the copyright owner not expressly dealt with above are reserved.

No representation, warranty or guarantee is made that the information in this document is accurate or complete. While care is taken in the collection and provision of this information, ELEXON Limited shall not be liable for any errors, omissions, misstatements or mistakes in any information or damages resulting from the use of this information or action taken in reliance on it.

Amendment Record

Version	Date	Description of Change	Changes Included	Mods/Panel/Committee Refs.
1.0	22/02/2018	Designated version	P357	P275/08
2.0	28/02/2019	28 February 2019 Release	P344	P284C/01

Contents

1	Introduction	5
1.1	Purpose and Scope of this document	5
1.2	Main Users of this document	5
1.3	Balancing and Settlement Code Provision	5
1.4	Acronyms and Definitions	5
2	DC and GC Limits	7
2.1	What are DC and GC and how are they used?	7
2.2	What are DC and GC Limits?	7
2.3	How are DC and GC Limits set?	8
3	Reviewing the Demand Capacity and Generation Capacity Limits	9
3.1	When should a review of the DC/GC Limits be initiated?	9
3.2	The DC/GC Limit review process	9
3.3	Key Performance Indicators	9

1 Introduction

1.1 Purpose and Scope of this document

1.1.1 Further to BSC Section K ‘Classification and Registration of Metering Systems and BM Units’, paragraphs 3.4.3A and 3.4.3B, this document sets out the principles and processes to be followed by BSCCo and the BSC Panel to review and determine the DC Limits and GC Limits¹. This document shall not be applicable to Secondary Balancing Mechanism (BM) Units.

1.1.2 In accordance with K3.4.2(c), 3.4.3 and 3.4.5, DC/GC Limits are used to determine whether a Lead Party must resubmit estimates of maximum Metered Volume for a Primary BM Unit in order to recalculate values of Demand Capacity (DC) and/or Generation Capacity (GC) for the Primary BM Unit.

1.2 Main Users of this document

1.2.1 This Demand Capacity and Generation Capacity Limit Review and Determination document should be used by:

- BSCCo; and
- BSC Panel (or its delegated authority).

1.3 Balancing and Settlement Code Provision

1.3.1 This document has been produced in accordance with the provisions of the BSC and in particular Section K. In the event of an inconsistency between the provisions of this document and the BSC, the provisions of the BSC shall prevail.

1.4 Acronyms and Definitions

1.4.1 Any capitalised term that is not defined in this Demand Capacity and Generation Capacity Limit Review and Determination document shall have the same meaning given to it as in the Code.

1.4.2 The acronyms used in this document are defined as follows:

BM	Balancing Mechanism
BSC	Balancing and Settlement Code (the “Code”)
BSCCo	Balancing and Settlement Code Company
CCP	Credit Cover Percentage
CEI	Credit Assessment Energy Indebtedness
CfD	Contracts for Difference
DC	Demand Capacity

¹ For the remainder of this document, DC Limits and GC Limits are collectively referred to as DC/GC Limits.

GC	Generation Capacity
KPI	Key Performance Indicator
MW	Megawatt
MWh	Megawatt Hours
SPD	Settlement Period Duration

2 DC and GC Limits

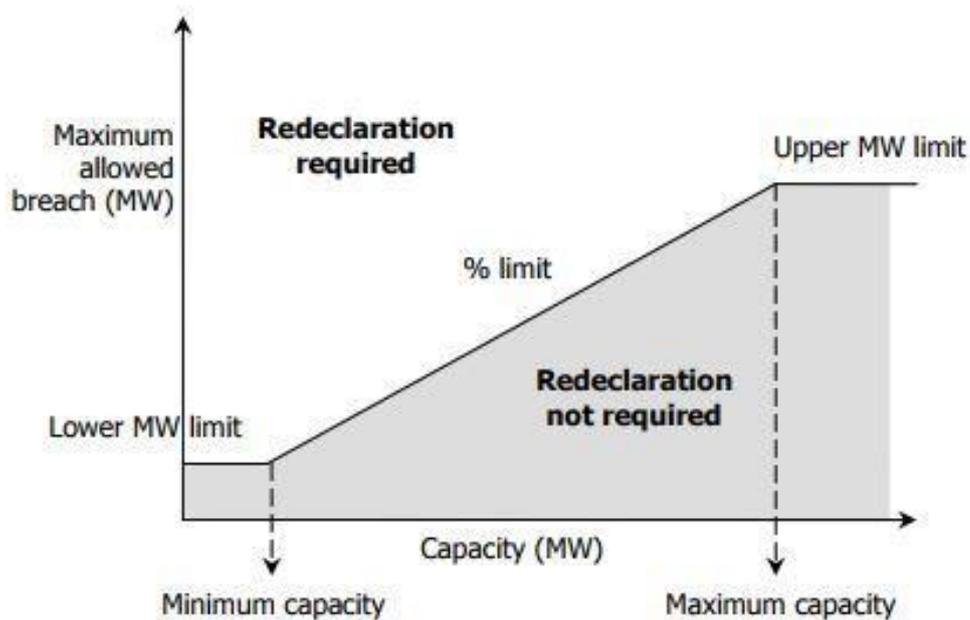
2.1 What are DC and GC and how are they used?

- 2.1.1 DC and GC are estimates of the Settlement Period maximum demand and generation capacity for a Primary BM Unit in a BSC Season. DC and GC values are used in the calculation of Parties' Credit Assessment Energy Indebtedness (CEI) and Credit Cover Percentage (CCP). Accurate values are essential for the Credit Cover Percentage calculation to operate effectively.
- 2.1.2 In accordance with K3.4.8 and BSCP15 'BM Unit Registration', DC and GC values are derived using either the expected maximum magnitude of negative (indicating demand) or positive (indicating generation) Metered Volumes for a single Settlement Period in the forthcoming or prevailing BSC Season. The Metered Volumes are doubled to convert from MWh to a MW capacity.
- 2.1.3 In accordance with K3.4 and BSCP15, Parties must submit expected maximum positive and negative values to the Central Registration Agent (CRA) ahead of each BSC Season. This is to ensure that the CRA updates GC and DC values that reflect the likely operation of the Primary BM Unit in the forthcoming BSC Season and facilitate more accurate calculation of CEI and CCP.

2.2 What are DC and GC Limits?

- 2.2.1 The provisions in K3.4.2(c), 3.4.3 and 3.4.5 require that declared DC/GC values are not exceeded by specified limits. Otherwise the Lead Party must re-declare the estimates of maximum negative and/or positive Metered Volumes to the CRA.
- 2.2.2 In particular, K3.4.3 sets out the criteria that trigger the need for Lead Parties to re-declare. In summary, they are that the Lead Party must redeclare if actual Primary BM Unit Metered Volume for a Settlement Period, doubled to convert to MW from MWh, exceeds the GC or DC by the relevant GC Limit or DC Limit. BSCCo regularly monitors Primary BM Unit Metered Volumes and DC/GC values. If a DC/GC Limit is breached, BSCCo will send a reminder to the Lead Party. However, the Lead Party is responsible for monitoring and maintaining its estimates of maximum Metered Volume.
- 2.2.3 K3.4.3A enables the BSC Panel to specify DC/GC Limits, which BSCCo publishes on the BSC Website – [Generation and Demand Capacity](#).
- 2.2.4 Diagram 1 below displays the historical relationship between a Primary BM Unit's actual demand and generation capacity and the re-declaration thresholds of the DC/GC Limits. The X-axis shows the measured output in MW and the Y-axis shows by how much that measured output would need to exceed the declared GC or DC to trigger a re-declaration. That is, up to a minimum measured capacity and above a maximum measured capacity the extent to which the Primary BM Unit's output (MW) may exceed the declared GC or DC is fixed. Between the lower and upper limits the extent to which the Primary BM Unit's measured output may exceed the declared GC or DC is set by scaling the measured output by a pre-determined percentage value.

Diagram 1



2.3 How are DC and GC Limits set?

- 2.3.1 K3.4.3A enables the Panel to determine the DC/GC Limits. BSC Modification P357 required that the values in K3.4.3 on 21 February 2018 should remain in force and be the DC/GC Limits.
- 2.3.2 Until the first review of DC/GC Limits is completed, the method for determining DC/GC Limits is to retain the values in effect on 21 February 2018.
- 2.3.3 In accordance with K3.4.3A, any change to the DC/GC Limits requires that the BSC Panel does so in accordance with this method and after consulting BSC Parties.

3 Reviewing the Demand Capacity and Generation Capacity Limits

3.1 When should a review of the DC/GC Limits be initiated?

- 3.1.1 In accordance with the requirements set in BSC Modification P357, the first review of the DC/GC Limits will be one year after the implementation of P357.
- 3.1.2 On an enduring basis, the Panel, or its delegated authority, may initiate a review as it sees fit, and at least on an annual basis.

3.2 The DC/GC Limit review process

- 3.2.1 As part of its ongoing monitoring processes, BSCCo will keep track of a number of Key Performance Indicators (KPIs) which will enable the Panel to determine whether DC/GC Limits remain fit for purpose. The KPIs used to monitor the relevance of DC/GC Limits are defined below in Section 3.3.
- 3.2.2 When a review is initiated, BSCCo will prepare and present a report to the BSC Panel or its delegated authority. The report should include analysis of the KPIs described below, as well as any additional information BSCCo believes could help the BSC Panel or its delegated authority to make its decision.
- 3.2.3 After reviewing the information provided by BSCCo, should the Panel or its delegated authority wish to change DC/GC Limits it must consult BSC Parties on the recommended limits. Following the end of the consultation, the results of the consultation will be presented to the Panel or its delegated authority at its next convenient meeting to enable the Panel or its delegated authority to decide whether to change the DC/GC Limits.
- 3.2.4 If the BSC Panel decides to amend the GC Limit, the DC Limit or both, BSCCo will notify CRA and BSC Parties of the new value(s) as well as the date from which the new value(s) will be effective. BSCCo will also publish the new value(s) on the BSC website with their effective from date.
- 3.2.5 New value(s) will be effective from the beginning of the next BSC Season following the Panel's decision to change them, so long as there are at least 20 Working Days' between the date of the Panel's decision and the start of the next BSC Season. Otherwise the new value(s) will become effective from the beginning of the following BSC Season.

3.3 Key Performance Indicators

- 3.3.1 As part of the review process, the BSC Panel or its delegated authority will consider a number of KPIs related to the DC/GC Limits. These will be monitored by BSCCo and include at least the following:
- The number of breaches of the limits for each of the GC and DC per BSC Season;
 - The maximum and average amplitude of the breaches in MW;

- The maximum and average difference between the relevant Primary BM Units' metered volumes and their declared GC and DC;
- The proportion of distinct Primary BM Units that breached the limits over a BSC Season; and
- The number of dormant Primary BM Units, i.e. with no metered volumes allocated to them.

3.3.2 Each KPI will be reported per capacity category displayed in Diagram 1: Lower MW limit, % limit and Upper MW limit; as well as by Primary BM Unit type.