

Generation Capacity and Demand Capacity Limits KPIs Review

Imbalance Settlement Group (ISG)

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Purpose of paper **Decision**

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Summary **This paper provides an annual review of the Generation Capacity and Demand Capacity (GC/DC) Limits, based on analysis of the five Key Performance Indicators (KPIs) outlined in the Generation Capacity and Demand Capacity Limit Review and Determination document.**

1. Background

- 1.1 Generation Capacity (GC) and Demand Capacity (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' 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.
- 1.2 Approved BSC Modification [P357 'Removal of GC/DC tolerance parameters from BSC Section'](#) was implemented on 22 February 2018. P357 was raised in order to improve the process for reviewing and amending the GC/DC limits used to determine if a GC/DC breach occurs. Prior to P357, the GC/DC Limits were set in [BSC Section K: Classification and Registration of Metering Systems and BM Units](#) 3.4 and amending them required a BSC Modification. The [Issue 68](#) workgroup originally identified this lack of flexibility and recommended the BSC be changed. P357 was raised to move the limits from the BSC to the [BSC Website](#) and implement a more flexible process for amending them.
- 1.3 P357 introduced a requirement that the Panel establish guidance for determining and reviewing the GC/DC limits, '[Demand Capacity and Generation Capacity Limit Review and Determination](#)'.
- 1.4 The aim of the GC/DC limit review is to reduce the amount of BSC Parties that have Metered Volumes that exceed the declared GC/DC value, but are still within the tolerances that the GC/DC limits permit. This will reduce the amount of energy that is being unaccounted for in BSC Parties Credit calculations, and ultimately improve the accuracy in the CCP.
- 1.5 At the ISG's September 2019 meeting, Elexon provided the first annual review of the GC/DC Limits ([ISG221/03](#)), based on four quarterly Key Performance Indicator (KPI) reports that covered a yearly period spanning BSC Spring Season 2018 to BSC Winter Season 2018/2019. The ISG approved changes to each of the GC/DC limits, with effect from 1 December 2019.
- 1.6 Currently, the tolerance limits are (in magnitude):

Declared GC/DC	GC/DC Limit
< 100 MW	0.3 MW

100-500 MW	1%
> 500 MW	5 MW

- 1.7 The GC/DC KPI Limits review which was presented at the ISG in February 2021 proposed no changes be made to the GC/DC limits. This was partly due to the impact of COVID-19 on BSC Parties. With the tolerance limit changes introduced in 2019, it provided a good balance between accuracy of GC/DC declarations, margin for error and the administrative burden for BSC Parties and BSC Agents in relation to frequency of breaches and changes to GC/DC values.

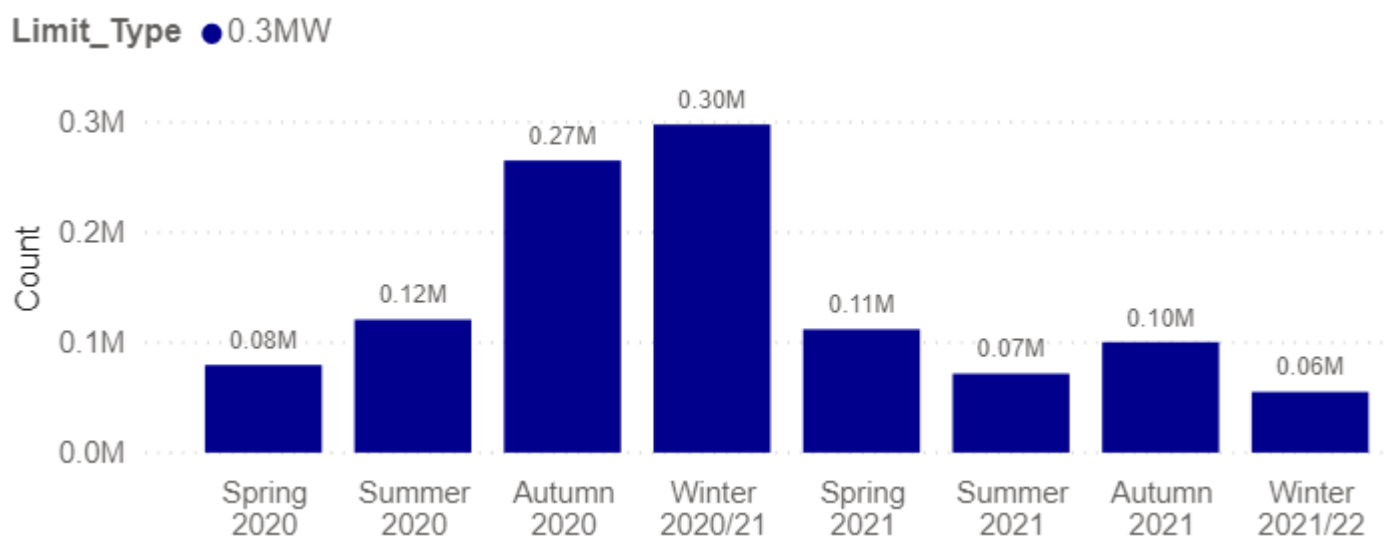
2. GC/DC Limits Review

- 2.1 Due to the volume and complexity of data, Elexon will highlight notable subsets of the data. In particular, as noted in the initial GC/DC limit review in September 2019 and as suggested in the Issue 68 workgroup, the focus of the KPIs is mostly centred on Supplier BM Unit DC breaches in the 0.3MW declared DC category. This is due to the direct relationship between Supplier BM Unit DC values and Credit Cover requirements and a majority of BM Units having a declared DC of less than 100MW.

- 2.2 The full set of KPI data is available in Attachment A.

3. Key Performance Indicator 1: The number of breaches of the limits for each of the GC and DC limits per BSC Season

- 3.1 Graph 1 shows the number of DC breaches that have occurred between Spring 2020 and Winter 2021 using the current limit of 0.3MW.

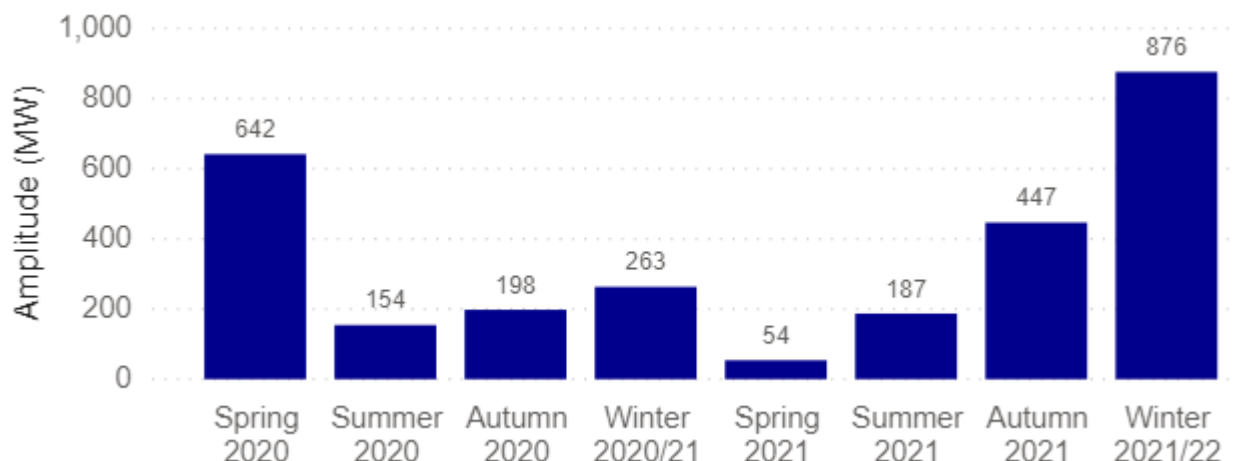


Graph 1. Number of DC breaches per BSC Season

- 3.2 Graph 1 demonstrates a change in the number of breaches since Spring 2020. Since the limit of 0.3MW was initially agreed and implemented, the number of breaches identified through the GC/DC breach monitoring process increased between Spring 2020 and Winter 2020/2021. This was deemed a positive result as it meant more updates to declared DC values for BM Units and a reduction of energy that is unaccounted for in BSC Parties Credit calculations, and improving the accuracy in the CCP.
- 3.3 Autumn and Winter 2020 Elexon saw a large spike in breaches. Elexon have investigated this increase and found that this was due to the new limits which had captured several BMUs that were previously operating above the 0.2MW limit but are now captured in the new 0.3MW limit. Since Spring 2021, Elexon have seen a reduction in the number of DC breaches meaning that the number of BMUs have reduced back down to a more consistent level.

4. Key Performance Indicator 2: The maximum and average amplitude of the breaches in MW

4.1 Graph 2 provides a view of the maximum amplitude of DC breaches for Supplier BM Units



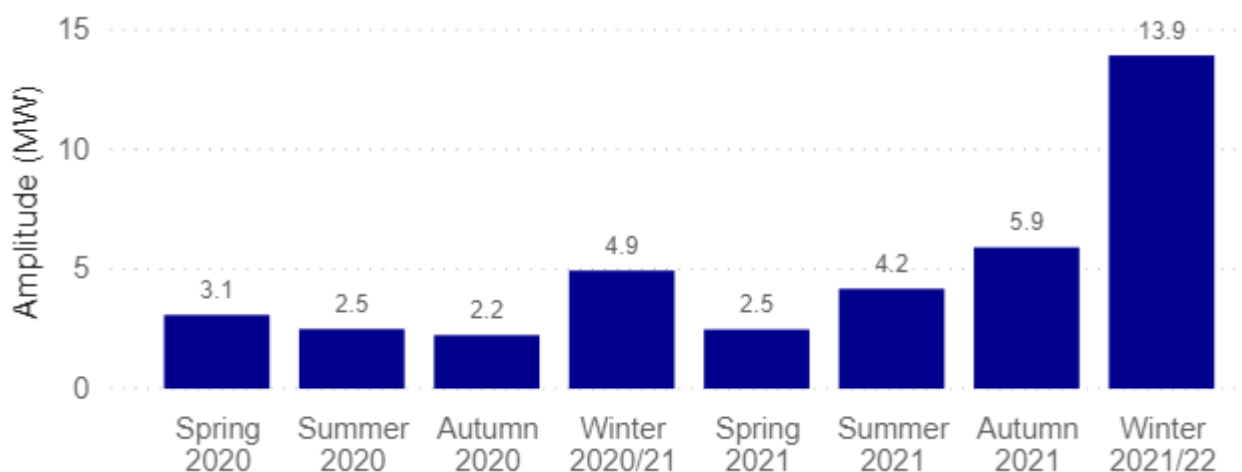
Graph 2. Maximum amplitude of DC breaches

4.2 Graph 2 identifies the most significant breaches that occur each season. The data in this graph allows Elexon to identify which BM Units triggered these breaches. Usually, these breaches are not recurring throughout a BSC Season for the offending BM Unit and are often due to erroneous Settlement data entering Settlement. This can be caused by:

- incorrect Settlement data being processed by BSC Agents or Supplier Agents; or
- a site holding incorrect Meter Technical Details (MTDs), incorrect estimates being used in Settlement; or
- due to migration of customers from other Suppliers who have ceased trading via the Supplier of Last Resort (SoLR) process (more recent occurrence).

4.3 Elexon have investigated the maximum breaches from recent BSC Seasons and can confirm that for these most significant breaches, there was erroneous Settlement data entered into Settlement for the offending BM Units. These breaches were identified through the GC/DC breach process and consequently appealed through the GC/DC breaches appeals process by the Supplier.

4.4 Graph 3 provides a view of the average amplitude of DC breaches for Supplier BM Units.

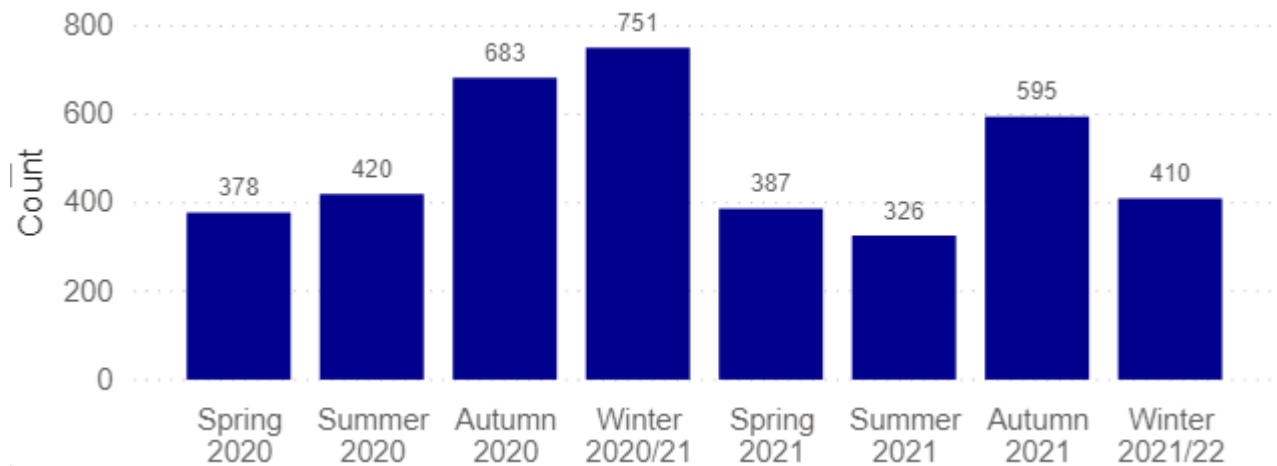


Graph 3. Average amplitude of DC breaches

4.5 Graph 3 highlights the average DC breach limit per BSC Season. As it stands, the current DC limit of 0.3MW currently provides significant headroom for capturing the majority of DC breaches during a BSC Season and Elexon considers the current DC limit of 0.3MW to be suitable for the current trend of average amplitude of DC breaches, which are all identified via the GC/DC breach monitoring process

5. Key Performance Indicator 4: The proportion of distinct Primary BM Units that breached the DC limits over a BSC Season

5.1 Graph 4 provides a view of the number of distinct BM Units with a DC breach per BSC Season.

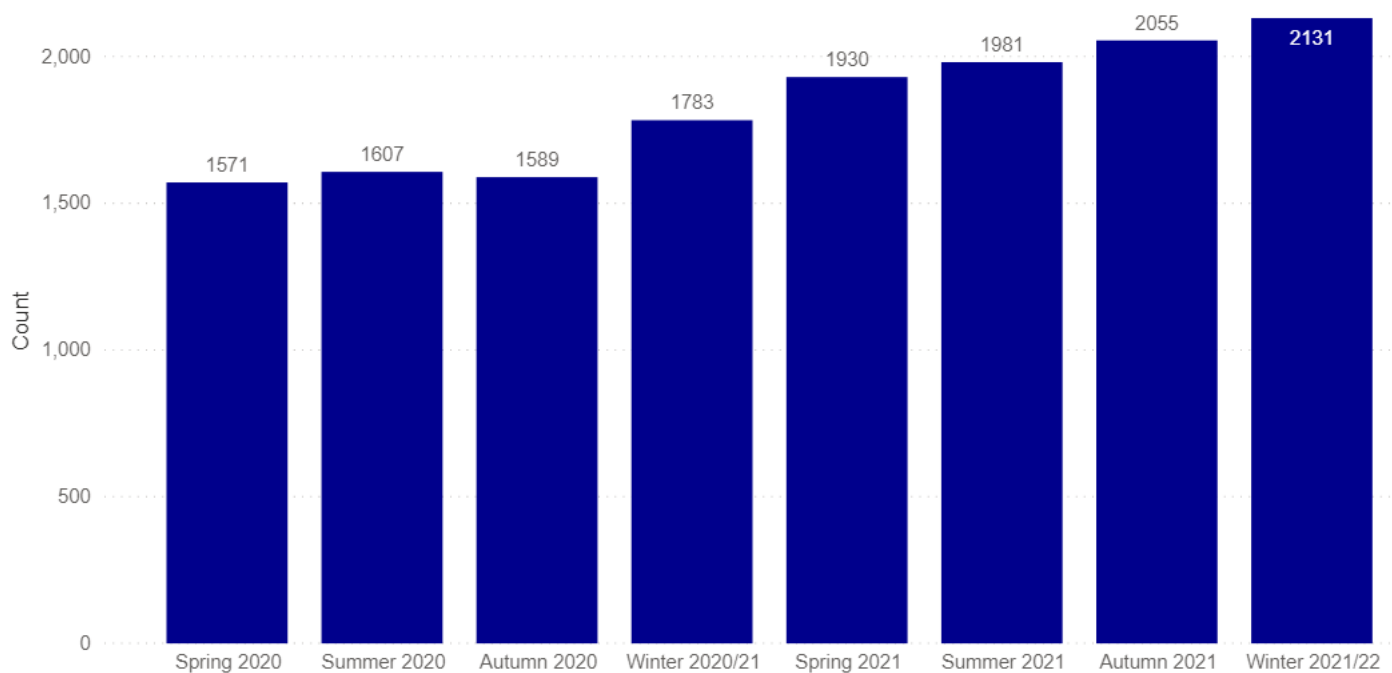


Graph 4. Number of distinct BM Units with a DC breach per Season

5.2 Elexon has decided not to focus on a particular DC limit for KPI 4. It is worth noting though that the overall amount of BMUs breaching this year has reduced due to normalisation of market conditions.

6. Key Performance Indicator 5: The number of dormant Primary BM Units

6.1 Graph 5 provides a view of the number of dormant Primary BM Units that have no metered volumes allocated.



Graph 5. Number of dormant Primary BM Units

6.2 As with KPI 4, Elexon has decided to include all GC/ DC limits, to provide an industry wide view of the increase in the number of dormant Primary BM Units

- 6.3 Since the last GC/DC limit review in 2021, Elexon have found the number of Primary Supplier BM Units dormant¹ have increased further by a total of 466 BM Units. (1589 in BSC Season Autumn 2020 to 2055 in BSC Season Autumn 2021.)

7. Next Steps

- 7.1 Based on the analysis of this year's GC/DC KPIs report and the GC/DC breach monitoring process, Elexon propose for no changes to be made to the current GC/DC limits.
- 7.2 The analysis provided indicates that the current GC/DC limits, introduced in December 2019, are still having a positive impact in identifying inaccurate GC/DC values that would not previously have been identified. As highlighted in the analysis of KPI 2, the current GC/DC limits still provide significant headroom for capturing the majority of GC/DC breaches. Elexon consider the current GC/DC limits to provide a good balance between ensuring GC/DC accuracy, whilst also still providing parties some margin for error in their seasonal and mid-seasonal GC/DC declarations.
- 7.3 Elexon will present the next annual GC/DC limits KPI review once another full year of Seasonal data is available.

8. Recommendations

- 8.1 We invite you to
- (a) **NOTE** the analysis presented in the paper; and
 - (b) **RECOMMEND** that no changes be made to the current GC/DC Limits.

Attachments

Attachment A – GC/DC KPIs Report (2020/2021)

For more information, please contact:

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¹ The main contributor to the increase of the dormant Primary BM Units