

Modification proposal:	Connection and Use of System Code (CUSC) CMP314: Updating the CUSC to align Power Available with the Grid Code definition for Power Park Modules		
Decision:	The Authority ¹ directs that this modification be made ²		
Target audience:	National Grid Electricity System Owner Limited (NGESO), Parties to the CUSC, the CUSC Panel and other interested parties		
Date of publication:	22 August 2019	Implementation date:	01 April 2020 ³

Background

NGESO is the System Operator for the National Electricity Transmission System (NETS) in Great Britain. It is responsible for securely operating the NETS in an economic and efficient manner. It takes actions to ensure that electricity demand and supply is continuously balanced so that the NETS is operated at a constant and stable frequency. This includes contracting with generators to ensure there is enough reserve electricity to respond to any unexpected deviations in supply or demand in the necessary timescales.

In order to manage the system efficiently, NGESO needs an accurate view of the available 'headroom' provided by generators. This is the difference between a generator's current output and its maximum potential output. The relevant data items provided are:

- Physical Notifications (PNs): a generator's best estimate of its output for a half hour period. This is submitted prior to Gate Closure.⁴
- Maximum Export Limit (MEL): the maximum power a generator can export onto the NETS. This can be changed at any time.

In January 2015, the definition of MEL was changed in the Grid Code for Power Park Modules⁵ following the approval of GC0063. GC0063 modified the definition to be registered capacity less unavailable units and the Power Available signal was introduced to replace MEL in NGESO headroom calculations. This has not been reflected in the CUSC, which uses MEL in the De-load calculation.

De-load is a headroom calculation used to establish the available frequency response capability of a unit at any given time, by cross referencing the De-load value against the unit's response matrix capability table included in the Mandatory Services Agreement.

¹ References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work. This decision is made by or on behalf of GEMA.

² This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.

³ Implementation date is dictated by NGESO to ensure that updates to NGESO internal systems and appropriate industry engagement can be completed. This is in line with NGESO's Forward Plan 2019-21 that committed to deliver 'Power Available integration phase 2a' in Q4 2019-20.

⁴ This is the point in time in which trading for each half hour is finalised, one hour before each half hour period.

⁵ Power Park Module: "A collection of Non-Synchronous Generating Units (registered as a Power Park Module under the PC) that are powered by an Intermittent Power Source" (predominantly wind generation).

Thus, the current De-load calculation is no longer a correct measure of headroom for Power Park Modules and leads to incorrect response holding calculations that exaggerate Primary and Secondary response capability whenever the plant is operating below its registered capacity or MEL.

The modification proposal

CMP314 was raised on 29 March 2019 to align the CUSC with the Grid Code to reflect the introduction of Power Available and redefinition of Maximum Export Limit for Power Park Modules in the Grid Code under GC0063. The proposer considers that this change will enable accurate settlement of Power Park Modules for Mandatory Frequency Response when participation in the market increases as an outcome of Power Available integration. Once Power Available signals are integrated into ESO processes and systems, the ESO control room will have better visibility of these generators, enabling them to actively participate in the Mandatory Frequency Response market. As De-load is a headroom calculation defined in the CUSC, it should be changed from:

$$\begin{aligned} \text{De-load} &= (\text{MEL} - \text{PN}) \\ &\text{to} \\ \text{De-load} &= (\text{PA} - \text{PN}) \end{aligned}$$

for Power Park Modules but remain the same for all other types of generation. So, the proposal is to change the calculation as defined in the CUSC section 11.3 to match the Grid Code.

CUSC Panel⁶ recommendation

At the CUSC Panel meeting on 28 June 2019, a majority of the CUSC Panel considered that CMP314 would better facilitate the relevant CUSC objectives and the Panel therefore recommended its approval.

Our decision

We have considered the issues raised by CMP314 and the final Modification Report (FMR) dated 12 July 2019. We have considered and taken into account the responses to the industry consultation(s) on the modification proposal which are attached to the FMR⁷. We have concluded that:

- implementation of the modification proposal will better facilitate the achievement of the applicable objectives of the CUSC;⁸ and
- directing that the modification be made is consistent with our principal objective and statutory duties.⁹

Reasons for our decision

We consider this modification proposal will better facilitate CUSC objectives (a) and (b) and has a neutral impact on the other applicable objectives (c) and (d).

⁶ The CUSC Panel is established and constituted from time to time pursuant to and in accordance with section 8 of the CUSC.

⁷ CUSC modification proposals, modification reports and representations can be viewed on NGET's website at: <http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/>

⁸ As set out in Standard Condition C10(1) of the Electricity Transmission Licence, see: <https://epr.ofgem.gov.uk//Content/Documents/Electricity%20transmission%20full%20set%20of%20consolidated%20standard%20licence%20conditions%20-%20Current%20Version.pdf>

⁹ The Authority's statutory duties are wider than matters which the Panel must take into consideration and are detailed mainly in the Electricity Act 1989 as amended.

(a) the efficient discharge by the licensee of the obligations imposed upon it under the Act and by this licence

The majority of the CUSC Panel and consultation responses consider CMP314 better facilitates objective (a) as it helps to facilitate the participation of Power Park Modules in Mandatory Frequency Response (MFR) by enabling correct settlement and, where appropriate, payment of these generators in relevant circumstances. Other consultation responses were neutral towards objective (a). We agree that the modification better facilitates this objective for the reasons provided by CUSC Panel members [and consultation respondents?]. In particular, it will help to ensure there is alignment between requirements in the CUSC and the Grid Code. It will also help to ensure NGESO can meet its licence obligations to operate the system efficiently and to ensure there is competition in balancing markets.

(b) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity

The CUSC Panel consider the proposal better facilitates objective (b). This is because they consider that the modification will allow headroom from windfarms to be calculated and promote competition in the provision of Mandatory Frequency Response by aligning the CUSC with the Grid Code. They consider that this will support competitive markets and the fair treatment of renewable energy generation in the market place.

We agree with the CUSC Panel's view that this modification enables the accurate calculation of the response capability of wind farms, as well as their settlement for Mandatory Frequency Response services. This will help to ensure wind farms can fairly compete in balancing services markets and, in turn, will reduce overall response holding costs during high wind periods.

Decision notice

In accordance with Standard Condition C10 of the Transmission Licence, the Authority, hereby directs that modification proposal CMP314: Updating the CUSC to align Power Available with the Grid Code definition for Power Park Modules be made.

Wider comments on this modification

We note that GC0063 was approved in January 2015. The Authority approved GC0063 on the expectation that the full benefits anticipated from this modification would be delivered. When approving a modification, we expect any consequential code, process and IT system changes to be made as quickly as possible following approval. We are therefore disappointed that this consequential change has been made four and half years after the original approval of GC0063. We note that NGESO has made commitments in its Forward Plan 2019-21 to integrate wind into reserve markets, and we strongly encourage it to make timely progress in this area.

Grendon Thompson
Head of SO Regulation

Signed on behalf of the Authority and authorised for that purpose