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for energy consumers

All interested parties,
stakeholders in GB and beyond.

Email: ESOperformance@ofgem.gov.uk

Date: 13 July 2021

Dear colleagues,

Decision to approve the Electricity System Operator's System Test Plan

On 21 December 2019, we[1] received a proposal for a System Test Plan (the "test plan") for Great Britain ("GB") from the Electricity System Operator ("ESO") developed in accordance with Article 43(2) of Commission Regulation (EU) 2017/2196[2] (the "NCER Regulation").[3] This proposal was submitted for our approval in accordance with Article 4(2) of the NCER Regulation.

This letter sets out our decision to approve the proposed test plan for GB as submitted by the ESO and also outlines any necessary next steps that must be taken.

[1] The terms "we", "us", "our", "Ofgem" and the "Authority" are used interchangeably in this document and refer to the Gas and Electricity Markets Authority. Ofgem is the office of the Authority.
[2] Commission Regulation (EU) 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration. The NCER Regulation came into force on 18 December 2017. Accessible at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R2196&from=en
[3] Following the UK's exit from the EU, references to this Regulation are as amended by The Electricity Network Codes and Guidelines (System Operation and Connection) (Amendment etc.) (EU Exit) Regulations 2019 – available here: https://www.legislation.gov.uk/uksi/2019/533/made

Background

Article 43(2) of the NCER Regulation states that each Transmission System Operator ("TSO") must define a test plan which identifies the equipment and capabilities relevant for the system defence plan and system restoration plan that have to be tested. Furthermore, this test plan must be consulted upon with Distributed System Operators ("DSO"), Significant Grid Users[4] ("SGU"), Defence Service Providers, and Restoration Service Providers. We note that the ESO undertook a one-month industry consultation on the totality of the proposed test plan commencing on 18 November 2019. As it stands, the ESO's proposed test plan is only applicable to parties contracted to the ESO under the Connection and Use of System Code ("CUSC").

Article 43(3) of the NCER Regulation states that the test plan shall define the periodicity and the conditions of the associated tests, following the requirements outlined in Articles 44 through 47 of the NCER Regulation. It also states that the test plan must follow the methodologies in Commission Regulation (EU) 2016/631[5], Commission Regulation (EU) 2016/1388[6], and Commission Regulation (EU) 2016/1447[7] for the corresponding tested capability.

In order to fulfil the obligations set out in the NCER Regulation, the ESO has proposed that specific provisions found in the Grid Code constitute the test plan.[8] The ESO has stated that the proposed test plan will not replace any of the provisions currently held in the Grid Code. The ESO's submission also includes sections with reference to additional articles of the NCER Regulation in Article 50 and Article 51. We welcome the inclusion of actions based on these articles but we note that they do not form part of our assessment for this proposal.

On the date that we received the ESO's proposed test plan, the mapped provisions in the GB industry codes were not fully aligned with the requirements of the NCER Regulation, including Articles 44, 45, and 47 which are relevant to this decision. Grid Code

[4] Significant Grid Users are identified pursuant to Articles 11(4) and 23(4). We note that the ESO has a proposal outstanding for the complete list of Significant Grid Users pursuant to these articles.
[5] Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators. It came into force on 4 May 2016. Accessible at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0631&from=EN
[6] Commission Regulation (EU) 2016/1388 of 17 August 2016 establishing a Network Code on Demand Connection. It came into force on 6 September 2016. Accessible at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1388&from=EN
[7] Commission Regulation (EU) 2016/1447 of 26 August 2016 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules. It came into force on 15 September 2016. Accessible at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1447&from=EN
[8] Alongside its submission, the ESO included tables mapping the relevant provisions of the Grid Code to the requirements of the NCER Regulation.

modifications GC0127 and GC0128[9] have since been implemented to ensure that the Grid Code aligns with Articles 44, 45 and 47 of the NCER Regulation.

Below is a summary of the relevant changes introduced by GC0127 and GC0128:

- Section OC5.7 of the Grid Code to include the obligations relating to black start capability tests for black start service providers and a quick resynchronisation unit tests for generators.
- Section DRSC11.7 of the Grid Code was amended to include an obligation on non-embedded customer and CUSC parties who are demand response providers to test their capability after two consecutive unsuccessful responses or every year. It also sets out the obligation for these parties to test their low frequency demand disconnection every three years.
- Section ECC.A.5.4 of the Grid Code was amended to include an obligation on non-embedded customer, network operators, and relevant transmission licensee to aim to test their low frequency demand disconnection relays at least once every three years, with a possibility to extend testing to no more than every five years if considered required for operational purposes.

The ESO has since confirmed to us that each of the relevant mapped sections of the Grid Code is now up to date and that these proposed sections represent a complete test plan for GB under Article 43(2) of the NCER Regulation.

Decision

We have reviewed the proposal submitted to us in line with the requirements of the NCER Regulation, the wider objectives of the Regulation (EU) 2019/943[10], as amended by the Electricity and Gas (Internal Markets and Network Codes) (Amendment etc.) (EU Exit) Regulations 2020,[11] and our statutory duties and obligations. When assessing the ESO's proposal, we reviewed the proposed sections of the Grid Code to ensure that they met the requirements of Articles 44, 45, 46, and 47 and therefore ensuring that it satisfies the requirement to develop the test plan in accordance with Article 43(2).

1) Article 44 of the NCER Regulation

[9] Further information on both GC0127 and GC0128 can be accessed here: https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0127-eu-code-emergency-restoration
[10] Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity, available here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R0943
[11] The UK SI amendment of the Electricity Regulation is accessible at: https://www.legislation.gov.uk/uksi/2020/1006/contents/made

The ESO has proposed that sections OC5.7.1 and 5.7.4 of the Grid code constitute part of the test plan and meet the requirements of Articles 44(1) and (2) of the NCER Regulation. These sections of the grid code provide for testing of black start service providers at least every three years and the testing of trip to house load capabilities in generators. As a result, we consider the requirements of Article 44 fulfilled by the test plan submitted by the ESO.

2) Article 45 of the NCER Regulation

The ESO has proposed that sections DRSC11.7.1 and DRSC11.7.2 of the Grid Code constitute part of the test plan and meet the requirements of this Article. DRSC11.7.1 states that demand response service providers will have to execute a demand modification test abiding to the minimum timeframes provided for in Article 45(1) of the NCER Regulation. DRSC11.7.2 states that the relevant providers will have to undertake a low frequency demand disconnection test every three years. As a result, we consider the requirements of Article 45 fulfilled by the test plan submitted by the ESO.

3) Article 46 of the NCER Regulation

The ESO has proposed that section OC5.7.1 of the Grid Code constitute part of the test plan and meets the requirements of this Article. This section of the grid code both specifies that HVDC systems delivering a black start service are required to execute a black start capability test at least every three years and details how the test needs to be executed. As a result, we consider the requirements of Article 46 fulfilled by the test plan submitted by the ESO.

4) Article 47 of the NCER Regulation

The ESO has proposed that sections ECC.A.5.4.2 and ECC.A.5.3.2 constitute part of the test plan and meet the requirements of this Article. These sections of the Grid Code include obligations on non-embedded customers, network operators, and relevant transmission licensees to aim to test their low frequency demand disconnection relays at least once every three years, with a possibility to extend testing to no more than every five years if considered to be required for operational purposes. As a result, we consider the requirements of Article 47 fulfilled by the test plan submitted by the ESO.

In light of the above, we have decided to approve the ESO's proposal for the test plan pursuant to Article 43(2) of the NCER Regulation.

Next Steps

The ESO must ensure that any amendments to the test plan and the provisions that constitute it must follow the change process outlined in the NCER Regulation.

If you have any queries regarding the information contained within this letter, please contact Chris Statham (Christopher.Statham@ofgem.gov.uk).

Yours faithfully,

Adam Gilham
Senior Manager, ESMS