

National Grid ESO  
Faraday House  
Gallows Hill  
Warwick  
CV34 6DA

Julian.leslie@nationalgrideso.com  
Tel: 07901516638  
nationalgrideso.com

**7<sup>th</sup> May 2021**

## **Grid Code Compliance with Fault Ride Through Requirements**

Dear Sir/Madam,

Over the last few months we have experienced a growing number of instances whereby generation or network licensees' assets have failed to 'ride through' faults on the National Electricity Transmission System (NETS). These faults on the NETS have been 'normal' with system parameters being maintained well within the design standards and the requirements of the Grid Code and The System Operator Transmission Owner Code (STC).

As the Electricity System Operator our role is to ensure that we know of and manage risks on the system in order to manage the security of supply of the NETS across GB. An inability of generation, interconnector or Other transmission connected plant and apparatus being able to ride through 'normal' faults on the NETS is a situation that we cannot tolerate and is a serious risk that we need to manage quickly and effectively. As you will know it is the obligation of the Users and Network Licensees to ensure compliance with the Grid Code and STC is maintained at all times.

We have recently raised these concerns regarding grid code compliance with BEIS and Ofgem and they have confirmed their full support in the actions we are taking as laid out in this letter. BEIS and Ofgem have requested regular updates as to how responses to these actions are progressing.

**We request that all generators and network licensees take note of and respond to the following actions.**

### **Action 1:**

Within 3 months from the date of this letter please write to confirm that for each of the generating units and / or network asset(s) you operate that it is compliant with all aspects of the Grid Code or STC, and in particular the fault ride through capability as defined in the Grid Code sections CC.6.3.15, ECC.6.3.15 and STC Section K, Annex 1, paragraph 3 as applicable.

For Users that have an Interim Operational Notification or a Limited Operational Notification in place, only items which are listed as outstanding issues are regarded as incomplete in terms of compliance. Users are required to maintain compliance against all other aspects of the Grid Code.

In your letter confirming compliance with the Grid Code, we also require you to provide us with contact details where the ENCC can reach suitably authorised persons, who can make operational decisions relating to your assets at all times, this is to facilitate requests for Significant Incident Reporting as required in Grid Code OC7 and OC10.

**Action 2:**

Given the serious nature and the consequences of this issue the ESO will consider raising a Grid Code modification, and potentially STC and CUSC modifications, to provide clarity and transparency regarding what needs to happen in the minutes, hours and days after an apparent 'non-compliance' is observed. We look forward to engaging with you on this process and welcome any views that you may have on changes that are needed.

**Action 3:**

In the interim, we need to be able to manage the operational risks that non-compliant Users create to security of the NETS. In appendix 1, we have laid out an interim process that we will be using whilst full code modifications are developed. The process in appendix 1, pulls on the existing obligations and wording in the Grid Code, STC and CUSC, and intends to provide the clarity of the actions we are taking. It is necessary to take these actions to maintain security of supply.

Please do not hesitate to contact me or your compliance contract manager to discuss any questions you may have regarding this matter.

Your sincerely,



Julian Leslie

Head of Networks

## Appendix1: Interim process

As per action 3 above, ESO expects to follow the below steps to manage the system security risk following an unexpected generation loss/de-load coincided with a normally cleared transmission fault.

1. ENCC will issue a notification to a User or Network Operator as soon as a potential fault ride through issue is identified with a Generator, HVDC System and/or Network asset(s) from monitoring in accordance with OC5.4 and STC Section 3. Notifications from the control room will be a request for a Significant Incident Report (SIR) under Grid Code OC7, OC10 and STCP 03-1.
2. As part of the SIR request, the User or Network Operator will be asked to confirm to the ESO that the Generator, HVDC System or Network asset(s) is fully compliant with Grid Code and STC. An unexpected drop in power output or disconnection co-incident with a network fault potentially indicates failure to meet the Fault Ride Through requirements of Grid Code CC.6.3.15, ECC.6.3.15 or STC Section K as applicable until an alternative reason has been established.
3. Return to normal operation should not be undertaken until compliance has been confirmed in writing to the Power System Manager. If this cannot be confirmed, the relevant Generator, HVDC System and Network asset(s) should remain out of operation. Affected Users should redeclare their Import and Export Limit in accordance with Grid Code OC5.4.2 and BC2.5.3 and Good Industry Practice. Where necessary any synchronisation process should be done in coordination with the ESO in accordance with BC2.5.2.4.
4. For any SIR request, in line with Grid Code OC10.4.1.4 and STCP 03-1 Section 3.2.9, the User will have 2 hours to respond and Network Operators must respond as soon as reasonably practicable with a preliminary report into the loss of output. The User or Network Operator should follow this up within 2 days or as soon as reasonably possible with a full explanation in accordance with OC5.4.2.2, OC10.4.1.4 and STCP 03-1 Section 3.2. If there is a potential compliance issue, the ESO expectation is that the Generator, HVDC System, Network asset(s) should remain out of operation until a resolution is in place.
5. Where a potential fault ride through issue is identified with a Generator, HVDC System and/or Network asset(s) through post event analysis of monitoring in accordance with OC5.4 and STC Section 3 notifications will be sent to the User/Network Operator from the Transmission Operational Policy Team or Electricity Connection Compliance Team in accordance with Grid Code OC5.4.2.1 and CP/ECP.8.1(iii).
6. In accordance with OC5.4.2.2(b) the User and STC Section 3.2.9 the Network Operator must provide the ESO with an explanation of the reasons for failure and a proposal of the actions the User will take to comply with the CC, ECC or STC as appropriate. Users and Network Operators are reminded of their obligations to operate plant and apparatus in a manner which is compliant with the Grid Code and STC on the National Electricity Transmission System or distribution network. An unexpected drop in power output or disconnection co-incident with a network fault potentially indicates failure to meet the Fault Ride Through requirements of Grid Code CC.6.3.15, ECC.6.3.15 or STC Section K as applicable until an alternative reason has been established.
7. In addition, in accordance with OC5.4.2.3, the User, and STC Section 3.2.1,0 the Network Operator, will discuss with the ESO and agree the actions proposed and the appropriate short-term operational restrictions and the associated changes to Balancing Mechanism parameters for Generator, HVDC System and Network asset(s), as necessary.
8. The ESO will then revise any Interim Operational Notification in place or issue a Limited Operational Notification to ensure that the User and the ESO are fulfilling their respective Grid Code obligations (CP/ECP.6.3.6.4 & CP.ECP.8.5.4).

