

Modification proposal:	Grid Code GC0105: System Incidents Reporting		
Decision:	The Authority ¹ directs ² that the proposed modification to the Grid Code ³ be made		
Target audience:	National Grid Electricity System Operator ("NGESO"), the Grid Code Review Panel, Grid Code users and other interested parties		
Date of publication:	22 May 2020	Implementation date:	8 June 2020

Background

Prior to 2017, the Electricity System Operator ("the ESO") produced a system incident report⁴ for submission to the Grid Code Review Panel ("GCRP"). The system incident report helped industry and the GCRP to monitor the effectiveness of the technical requirements in the Grid Code.

In 2017, under the new governance arrangements the ESO stopped providing this report to the GCRP.

Grid Code GC0105: System Incidents Reporting ("the modification proposal") was made to codify the requirement for the ESO to produce and publish a System Incidents Report, submitting it to the GCRP.

The modification proposal

On 10 October 2017, the modification proposal was made by Element Power, and submitted to the GCRP for consideration. The GCRP sent the modification proposal to a Workgroup, where it was developed through 9 workgroup meetings. The proposer's solution ("the Original Proposal") introduces and specifies requirements and areas of reporting for the ESO. The ESO considered this to be beyond the report previously submitted to the GCRP, and so proposed a Workgroup Alternative Grid Code Modification ("WAGCM") which limits the scope of the solution to provision of the annual System Incident Report that was previously issued by ESO.

The differences between the Original Proposal and the ESO's WAGCM are noted in the table 1, below. In summary, the Original Proposal prescribes the reporting of incidents at a more granular level than the previously provided System Incident Report. In particular, it prescribes reporting the loss of infeed or exfeed at a lower threshold; >250MW, reporting frequency deviations from a slightly narrower frequency banding than the WAGCM, and includes greater reporting of faults than the WAGCM. It also prescribes the reporting of progress towards reporting of further events on the National Electricity Transmission System ("NETS"), including faults by type, voltage deviations and lightning strikes.

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 The Grid Code details the technical requirements for connecting to and using the National Electricity Transmission System (NETS). Link: <https://www.nationalgrideso.com/industry-information/codes/grid-code>

⁴ Including the reporting of unplanned outages of Interconnectors, load or generation connected to transmission or distribution networks.

Section	Original Proposal	WAGCM
OC3.1.1 [report content]	Incident Report and frequency data report	Incident Report
OC3.4.1 [reporting frequency]	Monthly	Annually
OC3.4.1(a)(i) [loss reporting]	Loss of infeed or exfeed =>250MW	Loss of Demand =>250MW, or loss of either generation or interconnection of 600MW
OC3.4.1(a)(ii) [frequency excursions]	outside of 49.7 to 50.3 Hz ⁵	Outside of 49.5 to 50.5 Hz ⁶
OC3.4.1 (a)(iii) [faults]	Fault on the NETS tripping =>250MW Faults as per CC.6.1.4 resulting in voltage change (400kV > +/-5% for >15 mins. 275KV and 132KV > +/- 10% for > 15 mins)	Faults as per CC.6.1.4 resulting in voltage change (400kV > +/-5% for >15 mins. 275KV and 132KV > +/- 10% for > 15 mins)
OC3.4.1 (b)(iii) [significant event frequency record interval]	<=1 second	1 second
OC3.4.1 (c) [event & data reporting detail]	Specifies events and data to be reported	N/A
OC3.4.2 [communication of reporting detail]	Notify all Electricity Distribution Licence holders and Network Operators of every Significant Event and request information to fulfil its duties in OC3.4.1.	N/A
OC3.4.3 [monthly reporting timelines]	Data collection, review and processing date specified (monthly), and report publishing date specified (monthly)	N/A – Annual report published and submitted to GCRP November and included in the System Operability Framework Report
OC3.4.4 [frequency reporting]	Frequency data at maximum 1 second intervals to be available in spreadsheet form Timescales for collating, reviewing and processing data specified	N/A
OC3.4.5 [historical reporting]	Missed reports since November 2017 to be made available	N/A

Fig: Table 1.

⁵ Based on data provided by the ESO workgroup representative.

⁶ In accordance with The Electricity Safety, Quality and Continuity Regulations 2002.

On 20 December 2018, a workgroup consultation was undertaken and closed. There were four responses and all supported the Original Proposal.

On 11 December 2019, a code administrator consultation was undertaken and closed. Again, there were four responses; three supported the Original Proposal, one supported the baseline.

Grid Code Review Panel recommendation

On 19 December 2019, the GCRP carried out their recommendation vote in relation to the Applicable Grid Code Objectives. The majority of the GCRP believe GC0105 better facilitates Grid Code objective (i) and (iii) and just under half believe it better facilitates objective (v).

The GCRP voted by majority in favour of the Original Proposal; there were eight votes for the Original Proposal, two votes for the baseline, and no votes for WAGCM.

Our decision

We have considered the issues raised by the modification proposal as contained in the modification proposal. We have also taken into account the responses to the industry consultation on the modification proposal which are included in the modification proposal.⁷

We have concluded that:

- implementation of the modification proposal will better facilitate the achievement of the objectives of the Grid Code;⁸ and
- approving the modification proposal is consistent with our principal objective and statutory duties.⁹

For clarity, we are approving the Original Proposal within the modification proposal.

Reasons for our decision

We consider that the Original Proposal of the modification proposal will better facilitate Grid Code objective (i) and (iii), and will have a neutral impact on all other objectives.

(i) to permit the development, maintenance and operation of an efficient, co-ordinated and economical system for the transmission of electricity

The Original Proposal of the modification proposal ensures that data of incidents on the NETS will be made available monthly, whereas the WAGCM proposes annual publication. When compared with the WAGCM, it also requires the reporting of smaller incidents, which is beneficial as it will capture more events such as multiple smaller generators tripping causing issues, as noted during the workgroup and GCRP votes. This should allow industry to better understand trends and issues emerging on the NETS resulting in

⁷ Grid Code proposals, final reports and representations can be viewed on NGESO's website at: <http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-code/Modifications/>

⁸ As set out in Standard Condition C14(1)(b) of the Electricity Transmission Licence, available at: <https://epr.ofgem.gov.uk/>.

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

more efficient development of the NETS. We therefore believe the Original Proposal of the modification proposal better facilitates this Grid Code Objective.

(iii) subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national electricity transmission system operator area taken as a whole

The Original Proposal of the modification proposal ensures that data that will aid the judgement of the NETS is made available monthly and requires the reporting of smaller incidents when compared to the WAGCM. This will help monitor the effectiveness of the Grid Code in ensuring the security of the NETS. It will also provide industry, in particular the GCRP, greater visibility and data of system incidents which may allow them to be better understood, thereby promoting the security of the NETS as a whole. We therefore believe the Original Proposal of the modification proposal better facilitates this Grid Code Objective.

Impact on other Industry Codes

We note that workgroup members and consultation respondents highlighted that a subsequent change to the System Operator Transmission Owner Code (STC) may be required to obligate each TO to provide the ESO with the information it needs to produce the report. We also note that the ESO workgroup representative stated that the ESO would produce the report with the information available to it until a subsequent change to the STC is made.

Decision notice

In accordance with Standard Condition C14 of the Transmission Licence, the Authority hereby directs that the Original Proposal within Grid Code modification proposal Grid Code GC0105: "System Incidents Reporting", be made.

Martin Queen

Principal Engineer – Systems & Networks

Signed on behalf of the Authority and authorised for that purpose