

WAGCM2 - Grid Code Alternative Form**GC0141: Compliance Processes and Modelling amendments following 9th August Power Disruption**

The events of 9 August 2019 unfolded when a transmission circuit faulted, and clearance caused unexpected losses of User's Plant and Apparatus. The consequence of this high level of generation loss led to the first stage of the low frequency demand disconnection scheme operating, which then led to approximately one million customers losing their electricity supply. Subsequent investigations by BEIS and Ofgem recommended that the processes for demonstrating compliance of new and long-term Users with the Grid Code and the modelling information from Users should be improved.

Overview: As per original but adds minimum threshold of 100MW, (inclusive of Users at Limited Operational Notification (LON) status) before requirement for Independent Engineer applies.

Proposer: Workgroup - subgroup

Contents

- What is the proposed alternative solution?
 - Difference between this and the Original Proposal
- What is the impact of this change?
- When will the change take place?
- Acronyms, key terms and reference material

What is the proposed alternative solution?

Four (4) of respondents to the workgroup consultation provided positive response to the role of the Independent Engineer. This modification brings out some of the challenges raised as an alternative.

Firstly, the use of an Independent Engineer may provide cost inhibitive to smaller generators. As a result, a threshold of installed capacity to be greater than 100 MW as this is deemed by the ESO as being at a level where a material impact can be seen. In addition, if the USER has been put into Limited Operational Notification (LON) and has a connection >100MW then the IE should be utilised for the scope of the ION only.

The Independent Engineer should be a person deemed by the USER to be sufficiently Technically Competent and with suitable experience and able to review, verify and validate that studies are competent as a first line of design assurance. To avoid confusion, it is not expected that the Independent Engineer should re-run any of the USER's compliance studies under revision

The role scope shall cover, and be limited to, the first review of Grid Code compliance data, results and information that would be sent to the ESO.

On a failure to agree between the USER and the Independent Engineer, the USER still has the right to submit the Grid Code compliance data and information which is subject to the disagreement to the COMPANY.

The Independent Engineer can be either from an independent company or internal (the onus is on the USER to declare that the Independent Engineer is without conflict of interest). It is understood that the risk stays with the USER, as a result, they should have the flexibility to discharge the responsibility as efficiently as possible. The absence of any conflicts of interest counter-signed by an employee deemed by the USER to be a director or otherwise legally authorised representative of that USER. Due to the complexity of the role to be undertaken by the Independent Engineer a separate guidance note will be required. The Guidance note should specify additional requirements (not additional legal obligations) on top of the Grid Code legal text but should only clarify details such text in terms of scope of the review and level of details.

Need for a Guidance note

To not overly burden the legal text with detailed requirements a guide note should be provided by an expert group of stakeholders to aid the USER. The guidance note should be written by the ESO. However, they should also seek consultation from users.

A) Examples of studies to be reviewed by the Independent Engineer

B) examples of a self-certification form

Legal Text ECP.A.3.1.2 only (CP will need changing as well

The Generator or HVDC System Owner shall submit simulation studies in the form of a report to demonstrate compliance. In all cases the simulation studies must utilise models applicable to the Synchronous Power Generating Module, HVDC Equipment or Power Park Module with proposed or actual parameter settings. Reports should be submitted in English with all diagrams and graphs plotted clearly with legible axes and

scaling provided to ensure any variations in plotted values is clear. In all cases the simulation studies must be presented over a sufficient time period to demonstrate compliance with all applicable requirements. For USERS with a Registered Capacity of 100MW all simulation study reports should be submitted to and checked for compliance to the Grid Code European Connection Conditions to an Independent Engineer prior to submission to the COMPANY. In addition, if a USER with a registered capacity of 100MW or greater is subsequently put into Limited Operational notification then the Independent Engineer shall check for compliance on the areas of defect in the LON. The USER shall inform the COMPANY of the use of and scope of the Independent Engineer. On a failure to agree between the USER and Independent Engineer then the USER has the right to submit any Grid Code compliance data which is subject to the disagreement to the COMPANY. The USER shall be responsible for declare to the COMPANY that the Independent Engineer has no conflicts of interest and has the remit to comment on the document. The confirmation should counter-signed by an employee deemed by the USER to be a director or otherwise legally authorised representative of that USER.

ECP.A.3.1.2.1 The USER shall be responsible for maintaining the Independent Engineer's review of the compliance until the next self-certification period.

New definitions

Independent Engineer: An Independent Engineer can comprise of an individual, group of individuals or a company. The Independent engineer can be a third party to the USER or can be employee/s of the USER with appropriate separation from conflicts of interest. The Independent Engineer's duties may be discharged by a combination of the options provided in this clause. The Independent engineer shall have the technical expertise and experience to competently discharge the duties of their scope of work.

What is the difference between this and the Original Proposal?

As per original but adds minimum threshold of 100MW, (inclusive of Users at Limited Operational Notification (LON) status) before requirement for Independent Engineer applies.

What is the impact of this change?

No impact

Proposer's Assessment against Grid Code Objectives	
Relevant Objective	Identified impact
(a) To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity	Positive: This Alternative provides focus on USERS with the

	most impact on the system to ensure greater security
(b) Facilitating effective competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity);	Positive As only USERS with the greatest impact are impacted then this ensures that the system remains competitive
(c) 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;	None
(d) To efficiently discharge the obligations imposed upon the licensee by this license and to comply with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency; and	None
(e) To promote efficiency in the implementation and administration of the Grid Code arrangements	Positive As only USERS with the largest impact are impact then the administrative burden on other USERS and THE COMPANY is minimised

When will this change take place?

Implementation date:

In the same timelines as GC0141

Implementation approach:

N/A

Acronyms, key terms and reference material

Acronym / key term	Meaning
CP	Compliance Processes
ECP	European Compliance Processes
HVDC	High Voltage Direct current
LON	Limited Operational Notification

Reference material:Need for a Guidance note

To not overly burden the legal text with detailed requirements a guide note should be provided by an expert group of stakeholders to aid the USER.

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B) examples of a self-certification form.