

## WAGCM6 - Grid Code Alternative Form

# GC0141: Preferred permutation across all GC0141 “Sub-Modification” workstreams

### Overview:

The Alternative has been raised to cover the proposers chosen permutation in relation to the elements that comprise the modification.

Details of the chosen permutation as attached and summarised below:

Solution	Independent Engineer	Sharing for SSTI / SSCI	RMS & EMT Models	Fault Ride Through Definition & Retrospective Requirements	Compliance Repeat Plan	Enhanced FRT Studies	Torsional Data
WAGCM6	No requirement for IE	ESO/TO share models as required	No specification required	No time duration or respective requirements	Submit material changes from submission made to achieve FON	Additional studies for complex connections agreed at start of process	All Users provide torsional data (retrospective)
	No change from Baseline						
	Original Proposal						
	Alternative Option						

**Requirement for an Independent Engineer** – Current Baseline

**Sharing of SSTI / SSCI Models** – Original Proposal

**Specification for RMS & EMT Models** – Current Baseline

**Fault Ride Through Definition and Retrospective Requirements** – Current Baseline

**Compliance Repeat Plan** – Alternative Option 5a (Only changes to original baseline data to be submitted in order to achieve compliance)

**Enhanced Fault Ride Through Studies** – Original Proposal

**Provision of Torsional Data for Older Plant** – Original Proposal

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## What is the proposed alternative solution?

The alternative covers the proposers chosen elements of the modification, with some elements differing from the Original Proposal.

## What is the difference between this and the Original Proposal?

### **Requirement for an Independent Engineer – Current Baseline**

SPR considers that the Current Baseline should not change because the Independent Engineer role will add an unnecessary interface to projects planned for construction, potentially delaying delivery and adding cost. There is also no clarity on the Original Proposal of who is qualified to be an Independent Engineer. SPR also considers that NGESO role should include the Independent Engineer role as currently NGESO Compliance Engineers provide a lot of input on studies required to be provided by developers as per requirements in GB Grid Code compliance process sections (CP and ECP).

### **Sharing of SSTI / SSCI Models – Original Proposal**

SPR supports the Original Proposal. SPR considers that NGESO sharing models for SSTI/SSCI studies provided by another User should expedite the time for delivery of these studies.

### **Specification for RMS & EMT Models – Current Baseline**

SPR considers that the Current Baseline should not change as in the development of the Original Proposal requirements, a select group of industry experts had the opportunity to provide valuable input and also is not fully clear the set of studies to be carried out with RMS or EMT models.

### **Fault Ride Through Definition and Retrospective Requirements – Current Baseline**

SPR supports the Current Baseline as SPR considers that FRT retrospective requirements are not acceptable as there are power stations already holding a FON. This status will be affected by any retrospective requirement. This could represent additional cost to plant that is already GB Grid Code compliant or potential application for derogations to plant that cannot meet the new requirements. Also, the issue of transient overvoltages after fault recovery was not addressed by the Original Proposal as the GB Grid Code does not specify on the voltage level and duration that a generator must withstand after fault clearance.

### **Compliance Repeat Plan – Alternative Option 5a (Only changes to original baseline data to be submitted in order to achieve compliance)**

SPR considers the above option should be implemented as only changes to the generator need to be notified to the NGESO rather than providing a full compliance process report every 5 years.

### **Enhanced Fault Ride Through Studies – Original Proposal**

SPR supports the Original Proposal for Enhanced Fault Ride Through studies as this should identify any potential issues during operation of the generator.

### **Provision of Torsional Data for Older Plant – Original Proposal**

SPR supports the Original Proposal as all Users should provide torsional data (where applicable) so SSTI studies can be performed in acceptable timescales.

## What is the impact of this change?

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	<b>Positive</b> WAGCM6 allows for this objective to be achieved
(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);	<b>Positive</b> WAGCM6 allows for fair competition to be achieved
(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;	<b>Positive</b> WAGCM6 helps to guarantee security and efficiency of electricity networks
(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	<b>Positive</b> WAGCM6 allows for discharge of licensee obligations
(e) To promote efficiency in the implementation and administration of the Grid Code arrangements	<b>Positive</b> WAGCM6 allows for efficient management of Grid Code requirements

## When will this change take place?

### Implementation date:

In line with GC0141

### Implementation approach:

**Acronyms, key terms and reference material**

Acronym / key term	Meaning
BCA	Bilateral Connection Agreement - between a User and ESO
ECC	European Connection Conditions – part of Grid Code
PC	Planning Code – part of Grid Code
TO	Transmission Owner
NG ESO	National Grid Electricity System Operator

**Reference material:**

None.