

## WAGCM14 - Grid Code Alternative Form

# GC0141:

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

### Overview:

The Alternative has been raised to cover the proposer’s 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
WAGCM14	No requirement for IE	ESO/TO share models as required	Specification of RMS & EMT model (fully encrypted)	Adds a time duration & retrospective requirements	Every 5 years Users submit compliance statement and DRC Schedules	Additional studies for complex connections agreed at start of process	User provides data when asked prior to a completion date of 1st April 2015
	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** – Original Proposal

**Fault Ride Through Definition and Retrospective Requirements** – Original Proposal

**Compliance Repeat Plan** – Original Proposal

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

**Provision of Torsional Data for Older Plant** – Alternative Option – 7a (requirement for User to only provide Torsional Data for Generating Units with a completion date before 01 April 2015 on request)

**Proposer:** Suggested by Workgroup on 12<sup>th</sup> April 2022. This Alternative comprises of the most popular options from each element of the modification from the vote that took place on the 11<sup>th</sup> March 2022.

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## What is the proposed alternative solution?

The alternative covers the proposer's 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

Maintaining the Current Baseline was the option preferred by 8 of the 14 voting workgroup members. Only 2 members preferred the Original Proposal. The other 4 preferred options that would see the Independent Engineer role apply only for connections >100 MW or in specific circumstances.

The majority view is that the Independent Engineer would add cost and complexity with no clear benefit and that the same function can be performed by the ESO itself.

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

The Original Proposal was the option preferred by 8 of the 14 voting workgroup members. Only 1 member preferred the Current Baseline. The other 5 preferred options that would rely on the use of third-party consultants or a new shared simulation environment.

The majority view is that sharing of models is necessary to allow the relevant parties to perform appropriate analysis of SSTI and SSCI. The Original Proposal achieves this efficiently as it avoids the procurement of external consultancy services or the establishment of a new study environment, and will deliver benefits on all Grid Code objectives.

### Specification for RMS & EMT Models – Original Proposal

The Original Proposal was the option preferred by 13 of the 14 voting workgroup members. The other 1 preferred the Current Baseline.

The majority view is that the Original Proposal, having been discussed at length and refined by experts representing different parts of the industry, represents a useful step forward in establishing a common approach for both RMS and EMT models, and will deliver benefits on all Grid Code objectives.

### Fault Ride Through Definition and Retrospective Requirements – Original Proposal

The Original Proposal was the option preferred by 10 of the 14 voting workgroup members. The other 4 preferred the Current Baseline.

The majority view is that the Original Proposal helps clarify FRT requirements, and will deliver benefits on all Grid Code objectives. While a more comprehensive review is underway in GC0155: [Clarification of Fault Ride Through Technical Requirements](#), this is not a barrier to this modification, recognising it may be added to at a later point.

### Compliance Repeat Plan – Original Proposal

The Original Proposal was the option preferred by 8 of the 14 voting workgroup members. Only 2 members preferred the Current Baseline. The other 4 preferred an option that would have compliance processes revisited only when there were material changes made.

The majority view is that the Original Proposal offers improvement in dealing effectively with the challenges posed by a rapidly changing power system and the growing risks associated with new technologies, and will deliver benefits on all Grid Code objectives.

### Enhanced Fault Ride Through Studies – Original Proposal

The Original Proposal was the option preferred by 12 of the 14 voting workgroup members. The other 2 preferred the Current Baseline.

The majority view is that the Original Proposal will deliver benefits on all Grid Code objectives.

### Provision of Torsional Data for Older Plant – Alternative Option 7a (requirement for User to only provide Torsional Data for Generating Units with a completion date before 01 April 2015 on request).

All 14 of the voting workgroup members preferred change from the Current Baseline although this was split 7 each for the Original Proposal and Alternative Option 7a.

Both the Original Proposal and Alternative Option 7a will deliver benefits on all Grid Code objectives but the Alternative would be more efficient because it requires data to be provided only if it is needed rather than imposing a blanket requirement on all Users.

## 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> This Alternative would deliver changes that enable more effective modelling and analysis, which is critical to achieving this objective.
(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> This Alternative provides enhanced guidance on modelling and removes barriers that affect data sharing, thereby helping to facilitate competition.

(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>  This Alternative includes options with beneficial impact on security and efficiency while minimising the economic cost.
(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>  This Alternative includes options that better enable licensees to discharge their obligations at lowest economic cost.
(e) To promote efficiency in the implementation and administration of the Grid Code arrangements	<b>Positive</b>  This Alternative includes options with majority support in the working group that could be progressed efficiently as a Grid Code modification.

### 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.