

Grid Code Alternative and Workgroup Vote

GC0168: Submission of Electro Magnetic Transient (EMT) Models

Please note: To participate in any votes, Workgroup members need to have attended at least 50% of meetings.

Stage 1 – Alternative Vote

If Workgroup Alternative Requests have been made, vote on whether they should become Workgroup Alternative Grid Code Modifications (WAGCMs).

Stage 2 – Workgroup Vote

2a) Assess the Original and WAGCMs (if there are any) against the Grid Code objectives compared to the baseline (the current Grid Code).

2b) Vote on which of the options is best.

Terms used in this document

Term	Meaning
Baseline	The current Grid Code (if voting for the Baseline, you believe no modification should be made)
Original	The solution which was firstly proposed by the Proposer of the modification
WAGCM	Workgroup Alternative Grid Code Modification (an Alternative Solution which has been developed by the Workgroup)

For reference the Applicable Grid Code Objectives are:

- i. To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity

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- ii. *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);*
- 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;*
- iv. *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*
- v. *To promote efficiency in the implementation and administration of the Grid Code arrangements*

* See Electricity System Operator Licence

Workgroup Vote

Stage 1 – Alternative Vote

Vote on Workgroup Alternative Requests to become Workgroup Alternative Grid Code Modifications.

The Alternative vote is carried out to identify the level of Workgroup support there is for any potential alternative options that have been brought forward by either any member of the Workgroup OR an Industry Participant as part of the Workgroup Consultation.

Should the majority of the Workgroup OR the Chair believe that the potential alternative solution would better facilitate the Grid Code objectives than the Original proposal then the potential alternative will be fully developed by the Workgroup with legal text to form a Workgroup Alternative Grid Code modification (WAGCM) and submitted to the Panel and Authority alongside the Original solution for the Panel Recommendation vote and the Authority decision.

"Y" = Yes

"N" = No

"–" = Neutral (Stage 2 only)

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“Abstain”

Workgroup Member	Alternative 1 – Inclusion of a Compensation / Cost Recovery Mechanism – Andrew Allan, RWE
Frank Kasibante	N
Akshay Prajapati	Y
Dr. Isaac Gutierrez	Y
Graeme Vincent	Y
Martin Aten	Y
Ranjan Sharma	Y
Srinivas Edla	Y
WAGCM?	WAGCM

Stage 2a – Assessment against objectives

To assess the Original and WAGCMs against the Grid Code objectives compared to the baseline (the current Grid Code).

You will also be asked to provide a statement to be added to the Workgroup Report alongside your vote to assist the reader in understanding the rationale for your vote.

AGCO = Applicable Grid Code Objective

Workgroup Member	Better facilitates AGCO (i)	Better facilitates AGCO (ii)	Better facilitates AGCO (iii)	Better facilitates AGCO (iv)	Better facilitates AGCO (v)	Overall (Y/N)
	Frank Kasibante, NESO					
Original	Y	-	Y	-	-	Y
WAGCM1	-	-	-	-	-	N

Voting Statement:

The Transmission System is becoming increasingly complex, not least as a result of the increasing use of power electronic converter technology much of which is used in modern generator and HVDC schemes. The additional complexity of these schemes necessitate the use of more advanced models so we can continue to operate a safe, secure, affordable and clean system.

In this respect, the Original Modification is positive against Grid Code objectives i & iii. NESO notes that a cost recovery mechanism is being dealt with via CUSC Mods CMP456 and CMP466, which we believe is the appropriate route to address this issue.

Workgroup Member	Better facilitates AGCO (i)	Better facilitates AGCO (ii)	Better facilitates AGCO (iii)	Better facilitates AGCO (iv)	Better facilitates AGCO (v)	Overall (Y/N)
	Akshay Prajapati, Orsted Power UK Limited					
Original	-	-	-	-	-	N
WAGCM1	Y	Y	Y	Y	Y	Y

Voting Statement:

Cost recovery mechanism is essential for successful implementation of this modification; hence it is important that reference to cost recovery is retained in GC as proposed by WAGCM1.

Workgroup Member	Better facilitates AGCO (i)	Better facilitates AGCO (ii)	Better facilitates AGCO (iii)	Better facilitates AGCO (iv)	Better facilitates AGCO (v)	Overall (Y/N)
	Belinda Gonzalez Parrado, ScottishPower Renewables					
Original	Y	N	Y	Y	Y	N
WAGCM1	Y	Y	Y	Y	Y	Y

Voting Statement:

As the original proposal does not consider a recovery mechanism for the development of EMT models for legacy plant, all size of developers are put at a disadvantage as these costs were never consider in capital expenditure neither operational expenditure (model maintenance) unlike those EU Users that are required to provide EMT models due to the requirements implemented in the GB Grid Code as a result of GC0141.

Workgroup Member	Better facilitates AGCO (i)	Better facilitates AGCO (ii)	Better facilitates AGCO (iii)	Better facilitates AGCO (iv)	Better facilitates AGCO (v)	Overall (Y/N)
	Graeme Vincent, SP Energy Networks					
Original	Y	-	Y	-	-	Y
WAGCM1	Y	Y	Y	-	-	Y

Voting Statement:

By ensuring that NESO and relevant parties have access to the appropriate EMT and RMS models will mean that the GB transmission system continues to be developed in an efficient, coordinated and economic manner whilst ensuring that the level of security of the NETS is maintained. The provision of these models will also aid any future post-incident analysis enabling causes to be identified and cost effective solutions to be implemented.

By including provisions for an appropriate cost recovery mechanism should help to mitigate any commercial disadvantage to existing Users which may result from the retrospective nature of these requirements.

Workgroup Member	Better facilitates AGCO (i)	Better facilitates AGCO (ii)	Better facilitates AGCO (iii)	Better facilitates AGCO (iv)	Better facilitates AGCO (v)	Overall (Y/N)
	Martin Aten, Uniper					
Original	Y	N	Y	Y	-	N
WAGCM1	Y	Y	Y	Y	-	Y
Voting Statement: WAGCM1 better meets all the criteria, because it is considered unfair to impose retrospective costs that could be higher for some Users than others, but if such costs can be recovered by all, then that is fairer for competition.						

Workgroup Member	Better facilitates AGCO (i)	Better facilitates AGCO (ii)	Better facilitates AGCO (iii)	Better facilitates AGCO (iv)	Better facilitates AGCO (v)	Overall (Y/N)
	Ross Strachan, EDF Renewables					
Original	Y	-	Y	-	-	N
WAGCM1	Y	-	Y	-	-	Y
Voting Statement: EDF support the GC0168 WAGCM1 proposal and stress this is on the basis that a cost recovery mechanism is introduced to allow User's to recover costs associated with developing EMT models for sites that were connected prior to 1st September 2022. The CUSC modification CMP456/466 is currently ongoing at the time of voting on the GC0168 modification and EDF therefore feel it is appropriate to retain a reference to the compensation arrangements in the PC.A.9.2.2.2 legal text. As discussed in the workgroup, EDF expect that NESO will take a reasonable approach to requesting retrospective EMT models and not overload User's with retrospective EMT model requests where that User may have a large number of sites connected prior to 1st September 2022; and NESO will be flexible in						

administering timelines for the delivery of retrospect EMT model's, with reference to the legal text "unless otherwise agreed" in PC.A.9.2.2.1 and PC.A.9.2.2.

Workgroup Member	Better facilitates AGCO (i)	Better facilitates AGCO (ii)	Better facilitates AGCO (iii)	Better facilitates AGCO (iv)	Better facilitates AGCO (v)	Overall (Y/N)
	Srinivas Edla, SSEN Transmission					
Original	Y	-	Y	-	Y	Y
WAGCM1	Y	-	-	-	Y	Y

Voting Statement:

We support the proposal to mandate EMT model submissions from all relevant users because it strengthens Grid Code compliance by ensuring modelling requirements are comprehensive and up to date. Establishing a Relevant Electrical Standard will provide consistent guidance, including for retrospective EMT models, improving accuracy and reliability. Incorporating these models into the wider GB system enhances our capability to conduct detailed analysis, investigations, and planning studies. Overall, this measure will improve the safe and reliable operation of the transmission system by enabling better prediction and mitigation of potential issues, thereby enhancing grid security.

Of the 7 votes, 3 voters said the original solution was better than the Baseline, 6 voters said WAGCM1 was better than the baseline.

Option	Number of voters that voted this option as better than the Baseline
Original	3
WAGCM1	6

Stage 2b – Workgroup Vote

Which option is the best? (Baseline, Proposer solution (Original Proposal) or WAGCM1)

Workgroup Member	Company	Industry Sector	BEST Option?	Which objective(s) does the change better facilitate? (if baseline not applicable)
Frank Kasibante	NESO	System Operator	Original	i, iii
Akshay Prajapati	Orsted Power UK Limited	Generator	WAGCM1	i, ii, iii, iv, v
Belinda Gonzalez Parrado	ScottishPower Renewables	Generator	WAGCM1	i, ii, iii, iv, v
Graeme Vincent	SP Energy Networks	Network Owner / Operator	WAGCM1	i, ii, iii
Martin Aten	Uniper	Generator	WAGCM1	i, ii, iii, iv
Ross Strachan	EDF Renewables	Generator	WAGCM1	i, iii
Srinivas Edla	SSEN-Transmission	Transmission Owner	Original	i, iii, v