

## Grid Code Alternative and Workgroup Vote

### GC0141: Compliance Processes and Modelling amendments following 9th August Power Disruption

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

#### 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)

#### The Applicable Grid Code Objectives:

- a) To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity
- 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);
- 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;
- 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
- e) To promote efficiency in the implementation and administration of the Grid Code arrangements

## Workgroup Vote

### 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 (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Afshin Pashaei, NGET					
Original	Y	Y	Y	Y	Y	Y
WAGCM5	Y	N	N	N	N	N
Voting Statement: In terms of cost efficiency WAGCM5 may be better alternative however in terms of facilitating required studies it may affect duration of studies.						

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Alastair Frew, Drax Generation Enterprise Ltd					
Original	N	Y	Y	Neutral	Neutral	N
WAGCM5	Y	Y	Y	Neutral	Neutral	Y
Voting Statement: Whilst this data is needed for on-going system development and new installations, it can be very difficult and costly for existing users to obtain this data for older plants. Therefore mandating all users provide this data when it might only be required for certain plants seems excessive as required by the original. However, codifying the existing arrangements where plant only needs to provide the data when there is a need as per WAGCM5 seems reasonable.						

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Ben Marshall, HVDC Centre					
Original	Y	Y	Y	Y	Y	Y
WAGCM5	N	N	N	N	N	N
Voting Statement: Note that small signal analysis mod, rejected for time can provide alternative practical methods which preserve the direction of the mod. Hence WAGM5 is not needed						

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Christopher Smith, National Grid Ventures/National Grid Interconnector Holdings Ltd					
Original	Y	Neutral	Y	Neutral	Y	Y
WAGCM5	Y	Neutral	Y	Neutral	Y	Y
Voting Statement: WAGCM5 provides the most efficient implementation and minimises impact of existing generators.						

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Colin Foote, SP Energy Networks					
Original	Y	Y	Y	N	N	N
WAGCM5	Y	Y	Y	Y	Y	Y
Voting Statement: Both options would deliver technical benefits, but the Alternative would be more efficient.						

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Isaac Gutierrez, Scottish Power Renewables (UK) Limited					
Original	Y	Y	Y	Y	Y	Y
WAGCM5	N	N	N	N	N	N
Voting Statement: SPR agrees with the original proposal - All Users provide torsional data (retrospective).						

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Mark Horley, National Grid ESO					
Original	Y	Y	Y	Y	Y	Y
WAGCM5	Y	Y	Y	Y	Y	Y
Voting Statement: Both Original and WAGCM5 make the Grid Code clear that torsional data is required from synchronous generation for studying torsional risks when converter based technology is connected nearby. WAGCM5 might cause delay to new connection if an existing						

User is not efficient in providing the information when requested but it may be a difficult/expensive activity deriving the required information.

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Marko Grizelj, Siemens Energy Ltd					
Original	Y	N	Y	Y	Y	Y
WAGCM5	Y	N	Y	Y	N	Y

Voting Statement:

The original provides the necessary torsional data of newer synchronous generators by default allowing a quicker turnaround time for future interaction studies.

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Martin Aten, Uniper Technologies Limited					
Original	N	N	N	N	N	N
WAGCM 5	Y	Y	Y	Y	Y	Y

Voting Statement:

There are many older generators that simply cannot provide the requested data and will not be prone to sub-synchronous torsional interaction.

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Michael Smailes, Offshore Renewable Energy Catapult					
Original	Y	Neutral	Y	Neutral	N	Y
WAGCM5	Y	Neutral	Y	Neutral	N	Y

Voting Statement:

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Nicola Barberis Negra, Orsted Hornsea Project Three Uk Ltd					
Original	Y	Y	Y	Y	Y	Y
WAGCM5	Y	N	Y	Y	N	N

Voting Statement:

I appreciate the concerns of older Power plants, but if the concerns now are for the overall stability of the transmission network, these torsional data are critical to ensure the system is develop with sufficient resilience and safety. Ultimately, it is in the interest of every User that such data are made available for wider stability studies

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Pukar Mahat, Siemens Gamesa Renewables					
Original	Y	Neutral	Neutral	Neutral	Neutral	N
WAGCM5	Y	Neutral	Neutral	Neutral	Neutral	Y
Voting Statement: WAGCM5 would be better as it can be difficult/expensive to obtain data.						

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Sigrid Bolik, Siemens Plc					
Original	Y	N	Y	Neutral	Neutral	Y
WAGCM5	Y	Y	Y	Neutral	Neutral	Y
Voting Statement: Asking for additional information will support improving the quality of models and results.						

Workgroup Member	Better facilitates AGCO (a)	Better facilitates AGCO (b)	Better facilitates AGCO (c)	Better facilitates AGCO (d)	Better facilitates AGCO (e)	Overall (Y/N)
	Tim Ellingham, RWE Supply and Trading					
Original	N	N	N	N	N	N
WAGCM5	Y	Y	Y	Y	Y	Y
Voting Statement:						

## Stage 2b – Workgroup Vote

Which option is the best? (Baseline, Proposer solution (Original Proposal), or WAGCM5)

Workgroup Member	Company	BEST Option? (Original, Baseline, WAGCMs)	Which objective(s) does the change better facilitate? (if baseline not applicable)
Afshin Pashaei	NGET	Original	All
Alastair Frew	Drax Generation Enterprise Ltd	WAGCM5	a, b, c

Ben Marshall	HVDC Centre	<b>Original</b>	<b>All</b>
Christopher Smith	NG Ventures/NG Interconnector Holdings Ltd	<b>WAGCM5</b>	<b>a, c, e</b>
Colin Foote	SP Energy Networks	<b>WAGCM5</b>	<b>All</b>
Isaac Gutierrez	Scottish Power Renewables (UK) Limited	<b>Original</b>	<b>All</b>
Mark Horley	NGESO	<b>Original</b>	<b>All</b>
Marko Grizelj	Siemens Energy Ltd	<b>Original</b>	<b>a, c, d, e</b>
Martin Aten	Uniper Technologies Limited	<b>WAGCM5</b>	<b>All</b>
Michael Smailes	Offshore Renewable Energy Catapult	<b>Original</b>	<b>a, c</b>
Nicola Barberis Negra	Orsted Hornsea Project Three Uk Ltd	<b>Original</b>	<b>All</b>
Pukar Mahat	Siemens Gamesa Renewables	<b>WAGCM5</b>	<b>a</b>
Sigrid Bolik	Siemens Plc	<b>WAGCM5</b>	<b>a, b, c</b>
Tim Ellingham	RWE Supply and Trading	<b>WAGCM5</b>	<b>All</b>

Of the 14 votes, how many voters said this option was best.

<b>Option</b>	<b>Number of voters that voted this option as better than the Baseline</b>
Original	<b>7</b>
Baseline	<b>0</b>
WAGCM5	<b>7</b>