

# Grid Code Alternative and Workgroup Vote

## GC0166: Introducing new Balancing Mechanism Parameters for Limited Duration Assets

**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)

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**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*
- ii. *To facilitate 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

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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*)

"Abstain"

### **No Alternative Requests were raised.**

### **Stage 2a – Assessment against objectives**

To assess the Original 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)
	Bukky Daniel – EDF Renewables					
Original	Y	Y	Y	Y	Y	Y

#### Voting Statement:

The Original proposal aims to introduce new parameters (MDB, MDO, and FSoE) to enhance the utilization of limited-duration assets. By having accurate data for both operational and planning purposes, battery assets can be dispatched effectively, leading to efficient use of battery storage resources. The proposed changes are expected to better support AGCO (i) to (iii) compared to the Baseline.

However, the success of this enhancement relies on the accuracy of the models developed by NESO and the effective utilization of the additional data provided by users. Also, while the issue of co-located BMU assets (multiple BMUs of different technology behind a single grid connection) was considered to be beyond the scope of this proposal, it is hoped that decisions regarding such assets align with the overall goal of optimizing battery storage asset utilisation.

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)
	Chris McLeod – EKU Energy					
Original	Y	Y	Y	Y	Y	Y

#### Voting Statement:

It is my assessment that the solution proposed by the GC0166 working group is expected to have a positive impact on permitting the development, maintenance, and operation of an efficient, coordinated, and economical system for the transmission of electricity. The new parameters introduced by this modification will allow Electricity Storage Modules to inform NESO of their energy available over time, instead of NESO having to derive this information from existing parameters that were not originally designed for this purpose. Specifically, the current "30-minute rule" used by NESO to estimate available energy and (dis)charging opportunities from Electricity Storage Modules which limits the duration of instructions and provides no information on the expected future state of these modules for longer-term planning. Allowing Energy Constrained BM Units to declare their available energy, and improving the quality of data received, better enables operational planning by NESO specifically through improved management of margins and

constraints. This enhancement in planning and management is expected to contribute directly to the security and efficiency of the electricity generation, transmission, and distribution systems. Similarly, by allowing these assets to declare their actual capabilities through the new parameters, the solution should create a more level playing field where dispatch decisions are based on merit rather than potentially restrictive rules of thumb, which should in turn promote effective competition. Overall, I believe the modification as proposed has the potential to affect tangible, positive change, and is a meaningful step to GB moving towards a genuine zero carbon electricity system.

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)
	Graz Macdonald – Waters Wye & Associates					
Original	Y	Y	Y	Y	Y	Y

#### Voting Statement:

It is clear that this mod is required to enable NESO to better manage the characteristics of energy storage. Storage operators will be pleased with this step forward.

In terms of the Grid Code objectives, the mod proposal is clearly better than the Baseline for all of the relevant objectives. Is the mod perfect? It doesn't quite feel like it, though the scenarios and analysis were thorough. Nonetheless it feels likely that further fine-tuning mods will be raised to address real life issues that may arise. On balance however, this mod should have an unambiguously positive effect on NESO, storage operators, and therefore the efficient and competitive operation of the transmission system.

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)
	Jamie Clark – Conrad Energy					

Original	Y	Y	Y	Y	Y	Y
<b>Voting Statement:</b>  Conrad Energy believes the GC0166 will support all 5 of the Grid Code objectives. This change should lead to more efficient scheduling and dispatch of energy storage, as well as other Balancing Mechanism units as NESO will have greater information with which to dispatch, and greater confidence in the energy available to them. This will lead to better economic outcomes which will reduce overall system costs and lead to lower overall costs of electricity for consumers. Additionally, this change supports competition as storage assets will no longer face discrimination in the Balancing Mechanism due to their duration or constrained energy status. Overall, Conrad Energy is supportive of this change and looks forward to its swift implementation.						

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)
	Kamila Nugumanova – DRAX Group					
Original	Y	Y	Y	Y	Y	Y
<b>Voting Statement:</b>  The Original solution will increase accuracy and visibility of storage assets' availability in real-time and will enable the control room to make more efficient dispatch decisions, leading to a more optimised use of available resources. Improving transparency and quality of data from duration limited BMUs will allow NESO to have more accurate forecasts and more efficient system scheduling, thus, improving safety and reliability of the system. These benefits will lead to more economic and efficient dispatch, better management of margins and constraint issues, hence a reduction in the overall balancing costs.						

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)
	Lauren Jauss – RWE Supply & Trading GmbH					
Original	Abstain	Abstain	Abstain	Abstain	Abstain	Abstain
Voting Statement:						
No statement provided.						

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)
	Mark Steger – EDF Energy (Uk)					
Original	Y	Y	Y	Y	Y	Y
Voting Statement:						
We believe this Grid Code modification will significantly enhance the ability of NESO to manage the transmission system using storage technology in lieu of fossil generation, however we also believe that further amendments may be required in the future to accommodate hybrid technology types that combine storage with renewable generation sources.						

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)
	Pete Noyce – KrakenFlex					
Original	Y	Y	Y	Y	Y	Y
Voting Statement:						
It is vital we move towards a more flexible system that can react closer to real time. For this to happen, particularly within the current market structure, NESO needs the						

right information about energy available. Our hope is this change will help provide additional useful information that will mean NESO is better placed to take the most economic action and will reduce the likelihood of some technologies being favoured for balancing actions over others (that are skipped). That said, we do think further work is needed to ensure NESO's role remains complementary to and supportive of the market, rather than seeking to overtake or subsume it.

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)
	Peter Errington – Flexitricity Ltd					
Original	Y	Y	Y	Y	Y	Y

#### Voting Statement:

Objective (i): To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity.

I support the view that the introduction of Maximum Delivery Offer (MDO) and Maximum Delivery Bid (MDB) parameters, alongside the Future State of Energy (FSOE) concept, enhances NESO's ability to forecast and operate the system more efficiently. It reduces reliance on short-term, conservative mechanisms such as the previous 15-minute and now 30-minute MIL/MEL rule, enabling more optimal dispatch decisions for limited duration assets (LDAs).

By capturing more granular and accurate data on the energy-limited capability of BMUs, this Original solution addresses key operational uncertainties, supporting coordinated system operation and longer-term planning.

Objective (ii): Facilitating effective competition in the generation and supply of electricity.

The modification introduces technology-neutral requirements applicable to all BMUs, avoiding distortions that would otherwise favour specific asset types. This ensures that both new and existing storage technologies, as well as conventional assets, are treated consistently.



Several Workgroup members highlighted concerns about unintended commercial impacts or favouritism. However, through the consultation and refinements (including the option for BMUs capable of delivering their full output to submit default values), I am satisfied that the solution does not restrict competition but instead creates a more level playing field and enables better market access for storage operators by removing the historical limitations inherent in MIL/MEL rules.

Objective (iii): 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.

The solution enhances security and efficiency by:

- Providing NESO with clearer visibility of the available capacity and constraints of storage assets.
- Supporting better balancing of the system, particularly as LDAs become a larger share of the energy mix.

The ability to anticipate energy availability over a longer horizon (up to 24 hours) strengthens NESO's operational resilience and reduces risks associated with last-minute imbalances, as noted across multiple Workgroup sessions.

Objective (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.

The modification aligns with NESO's obligations under the European Electricity Balancing Regulation (EBR) Article 18, as confirmed in discussions. It improves transparency, promotes the development of balancing services, and supports NESO's role in maintaining market integrity and compliance. The structured approach to defining parameters such as MDO, MDB, and FSoE reflects best industry practice and strengthens NESO's compliance with regulatory expectations.

Objective (v): To promote efficiency in the implementation and administration of the Grid Code arrangements.

The legal text and processes developed through the Workgroup discussions have been designed to minimise administrative complexity:

Defaulting mechanisms for MDO/MDB reduce operational burden.

Standardisation of submissions and use of existing IT systems ensure cost-effective implementation.

The concerns raised early in the Workgroup regarding system capacity and administrative overhead have been addressed through NESO's assurances about infrastructure readiness and data handling capacity.

#### Conclusion & Overall Vote:

After reviewing all documentation, including feedback from Workgroup meetings, worked examples, and NESO's responses to technical and commercial concerns, I am confident that the Original GC0166 solution:

- Supports NESO in optimising system operation.
- Facilitates fairer market participation.
- Enhances security and compliance.
- Promotes efficient administration

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)
	Richard Devenport – Shell					
Original	Y	Y	Y	Y	Neutral	Y

#### Voting Statement:

Introduction of MDO and MDB parameters will more clearly allow electricity storage modules the ability to communicate to NESO their availability to deliver bids and offers in the short term, as compared to the use of a MEL and MIL, which (while consistent with NESO guidance) is not as clear as it could be and of questionable compliance with a strict reading of the Grid Code. The parameters will allow electricity storage modules to compete on an even playing field in the short term; they will reduce the operational burden on NESO in translating MEL and MIL data into MDO and MDB (as is the case at present); and will more clearly indicate to NESO the actions which could be taken to balance the Transmission System. This would therefore have a positive effect against objectives (i), (ii), (iii), and (iv).

Consideration of the future state of energy of electricity storage modules will allow NESO to better understand and forecast the availability of these modules to meet system needs in planning timescales (that is, outside of the gate-closed window). This will give NESO the tools necessary to rely on storage assets to meet peak demands, something which I understand is not currently possible. Increasing the asset base which is under consideration at planning timescales will have a beneficial effect on the cost of operating the Balancing Mechanism, and provide additional security of supply, as NESO will understand what actions need to be taken to make these assets available to meet peak demands. This aspect of the proposal would therefore also have a positive effect against objectives (i), (ii), (iii), and (iv).

In my view, the proposed modification has no effect on the implementation and administration of the Grid Code arrangements, thus having a neutral effect on objective (v).

Overall, given a positive effect on objectives (i), (ii), (iii), (iv) and no effect on (v), I believe that the Original proposal better facilitates the applicable objectives than the current Baseline.

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)
	Robert Longden – Cornwall Insight/Eneco Energy Trade BV					
Original	Neutral	Y	Y	Y	Neutral	Y

#### Voting Statement:

GC0166 will allow NESO to operate the system more effectively and efficiently than the Baseline arrangements. These involve the use of parameters primarily designed for other purposes and as such are not an optimal way to deal with energy constrained assets. As such, GC0166 should be implemented. It is important that continuing liaison between NESO and wider Industry is maintained during this process to ensure a satisfactory outcome.

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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)
	Stephen Knight – SSE					
Original	Y	Y	Y	Y	Y	Y
Voting Statement:  I support the GC0166 modification as it improves the ability to efficiently optimise and dispatch limited storage assets and aligns with the future grid stability needs.						

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)
	Steve Baker – NESO					
Original	Y	Y	Y	Y	Y	Y
Voting Statement:  The changes to the Grid Code contained within this modification successfully introduces new Dynamic Parameters into the Code to allow better use of Electricity Storage Modules within the Balancing Mechanism. This supports the objectives of the Open Balancing Platform in enabling bulk dispatch of BMU assets.						

Of the 13 votes, how many voters said this option was better than the Baseline.

Option	Number of voters that voted this option as better than the Baseline
Original	12

## Stage 2b – Workgroup Vote

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

Workgroup Member	Company	Industry Sector	BEST Option?	Which objective(s) does the change better facilitate? (if Baseline not applicable)
Bukky Daniel	EDF Renewables	Generator	Original	i, ii, iii, iv, v
Chris McLeod	EKU Energy	Generator	Original	i, ii, iii, iv, v
Graz Macdonald	Waters Wye & Associates	Consultant	Original	i, ii, iii, iv, v
Jamie Clark	Conrad Energy	Generator	Original	i, ii, iii, iv, v
Kamila Nugumanova	Drax Group	Generator	Original	i, ii, iii, iv, v
Lauren Jauss	RWE Supply & Trading GmbH	Generator and Supplier	Abstain	N/A
Mark Steger	EDF Energy (UK)	Generator	Original	i, ii, iii, iv, v
Pete Noyce	KrakenFlex	Software provider	Original	i, ii, iii, iv, v
Peter Errington	Flexitricity Ltd	Generator	Original	i, ii, iii, iv, v
Richard Devenport	Shell	Supplier	Original	i, ii, iii, iv
Robert Longden	Cornwall Insight/Eneco Energy Trade BV	Generator	Original	ii, iii, iv
Stephen Knight	SSE	Generator	Original	i, ii, iii, iv, v
Steve Baker	NESO	System Operator	Original	i, ii, iii, iv, v