GC0166: Introducing new Balancing Programme Parameters for Limited Duration Assets

Workgroup 13
Online Meeting via Teams

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Welcome

Agenda

#	Topics to be discussed		Lead
1.	Workgroup Membership Expectations	1.	Chair
2.	Timeline and Objectives	2.	Chair
3.	Draft Legal Text Discussion	3.	All
4.	Draft Workgroup Report Review	4.	All
5.	Agree Terms of Reference Met	5.	All
6.	Workgroup Vote (TBC)	6.	All
7.	Action Update	7.	Chair
8.	Any Other Business and Next Steps	8.	Chair

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Expectations of a Workgroup Member

Contribute to the discussion	Be respectful of each other's opinions	Language and Conduct to be consistent with the values of equality and diversity	Do not share commercially sensitive information
Be prepared - Review Papers and Reports ahead of meetings	Complete actions in a timely manner	Keep to agreed scope	Email communications to/cc'ing the .box email

Your Roles

Help refine/develop the solution(s)	Bring forward alternatives as early as possible	Vote on whether or not to proceed with requests for Alternatives	Vote on whether the solution(s) better facilitate the Code Objectives

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Timeline

Objectives

Review Alternative

Review Draft Legal Text

Review Workgroup Report

Possible Workgroup Vote

Workgroups	
GC0166 Workgroup 1	01/02/2024
GC0166 Workgroup 2	07/03/2024
GC0166 Workgroup 3	08/04/2024
GC0166 Workgroup 4	15/05/2024
GC0166 Workgroup 5	10/06/2024
GC0166 Workgroup 6	21/06/2024
GC0166 Workgroup 7	18/07/2024
GC0166 Workgroup 8	20/08/2024
GC0166 Workgroup 9	22/10/2024
GC0166 Workgroup 10	12/11/2024
GC0166 Workgroup Consultation	18/11/2024 – 06/12/2024
GC0166 Workgroup 11	20/01/2025
GC0166 Workgroup 12	04/03/2025
GC0166 Workgroup 13	19/03/2025
GC0166 Workgroup 14	TBC
GC0166 Workgroup Report to Panel	23/04/2025
Post Workgroups	
GC0166 Code Administrator Consultation	06/05/2025 – 06/06/2025
GC0166 Draft Final Modification Report to Panel	18/06/2025
GC0166 Final Modification to Ofgem	08/07/2025
GC0166 Implementation Date	10 Business Days post Authority Decision

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Worked Example Update

Worked Example

MDO/MDB submissions only

1- Calculate MDO/MDB for the entire data range a PN has been submitted. Data submitted in 1 min granularity. Indicating the Offer and Bid Volume, in MWh that can be delivered if a BOA were to be sent starting at that minute. A BOA can start at any minute within the BM Window and always ends at the BM Gate.

2- The MDO/MDB volume must be calculated so that the entire CCL (Capped Committed Level in [BETTA Despatch Instruction Guide](#)) can be met within the BM window and the first settlement period after the BM Window. CCL is the Capped Committed Level after a PN is adjusted by BOA.

3-Energy volumes required for ancillary service delivery must be taken in account when calculating MDO/MDB.

4- A BOA can be sent a second before the BM Gate moves and locks in the next settlement period. As such MDO/MDB must take account of the settlement period after the BM Window. It will not be acceptable for the declared PN not to be followed or for the declared PN to be capped by MEL and MIL once within the BM Window due to the state of energy being altered by a BOA that was accepted when the BOA did not exceed MDO/MDB.

5- MDO/MDB can be resubmitted within the BM Window: after a BOA is accepted or a PN Change in the first settlement period after the BM Window. The BM Unit no longer being able to achieve the previously stated value as a result of an unavoidable event. Examples of such an event include (but are not limited to) plant breakdowns, or events requiring a variation on safety grounds (relating to personnel or plant). Or The BM Unit fully utilising the energy reserved (or storage capacity for energy which was reserved) for delivery of System Ancillary Services or Commercial Ancillary Services.

6-MDO/MDB must be submitted for the same duration a PN is submitted. MDO/MDB will default at 11:00 each day.

The GC0166 Worked Example Spreadsheet is included in the Workgroup 12 papers shows a data submission example for :
1- No BOA and Zero PN
2- PN Submitted in Settlement Period 4
3- BOA accepted in Settlement period 1
4- Second BOA accepted in Settlement Period 1
5- Third BOA accepted in Settlement Period 2
6- PN changed in Settlement Period 4 to release volume within BM window.

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# Worked Example

Future State of Energy Model

1- Submit the parameters required by FSOE model via Single Markets Platform.
a) Import and Export Efficiency
b) SoE Maximum and Minimum Limit
c) Daily Cycle Limit

2- Submit real time SoE through SCADA (IEMS)

NESO will use the FSOE model to optimise the Energy Constrained BM Units within and beyond the BM Window.

As the FSoE Model will not be 100% accurate, the MDO/MDB submissions will be used to correct the model within the BM Window to ensure BOA instructions delivered by Energy Constrained BM Units.
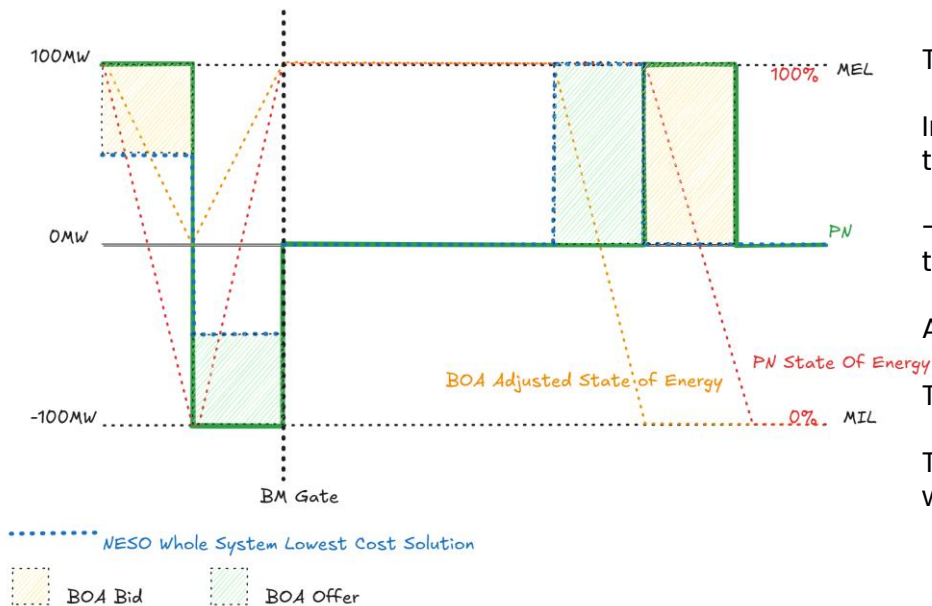
The FSoE model will keep a BMU within the declared Max/Min State of Energy Limits

In this example the unit has a 100MW PN depleting the state of energy completely within the first half of the BM Window. Indicated by the PN State of Energy.

-100MW PN in the second half of the BM Window leaving the unit with a full State of Energy at the end of the BM Window.

A 100MW PN several hours outside the BM Window leaving the unit fully depleted.

The FSoE Model calculated the cost optimal load point for this asset indicated by the blue dotted line.

To implement the optimiser output four BOAs would be required. And the State of Energy will remain within the State of Energy limits indicated as a percentage in this example between 0% and 100%

Review Legal Text

Legal Text (1): Glossary & Definitions

GRID CODE SECTION	CODE REQUIREMENTS	DETAILS POST-CONSULTATION	COMMENTS/ WORDING AMENDMENTS- Suggested wording; narrative; WG Member comment;
Glossary & Definitions	New definition: **Balancing Mechanism Window Period**	Has the meaning set out in the **BSC**.	
Glossary & Definitions	New definition: **Bid Acceptance**	An acceptance by a **BM Unit** of a **Bid-Offer Acceptance** to decrease its **Export** onto, or increase its **Import** from, the **National Electricity Transmission System**.	**FOR DISCUSSION AT WG13** An acceptance by a **BM Unit** of a **Bid-Offer Acceptance** to decrease its export onto, or increase its import from, the **National Electricity Transmission System**, where in this context import and export are as defined in the **BSC**.
Glossary & Definitions	~~New definition~~ ~~**Energy Constrained BM Unit**~~	~~Any **BM Unit** which for any reason, apart from **Plant** failure, would not be able to fulfil a **Bid-Offer Acceptance** to declared Maximum Export Limit (MEL) or Maximum Import Limit (MIL) within the **Balancing Mechanism Window Period**.~~	**FOR DISCUSSION AT WG13** Added in WG12 on 4th March A WG Member suggested "for the duration of the **Balancing Mechanism Window Period**" NESO and other WG members believe this is not necessary in Legal Text as there is no reference to it in the proposed GC Text. Propose to remove from Legal Text but use in Guidance and Explanation notes / WG Report to avoid proliferation of terminology e.g. LDA.
Glossary & Definitions	~~New definition:~~ ~~**Export**~~	~~Has the meaning set out in the **BSC**.~~	**FOR DISCUSSION AT WG13** If adopt suggested changes to **Bid Acceptance** and **Offer Acceptance**, no need for this new defined term in GC as would use import and export as used in the BSC. Therefore, have deleted.
Glossary & Definitions	New definition: **Future State of Energy (FSoE)**	For each **Electricity Storage Module**, the **Future State of Energy** is a series of MWh figures and associated times, which is calculated by **The Company** using the data provided under BC 1.A.11.1, making up an estimated profile of the energy stored in that **Electricity Storage Module**.	Updated in WG12 on 4th March and voted on. For each **Electricity Storage Module**, this is a series of MWh figures and associated times, which is calculated by **The Company** using the data provided under BC 1.A.11.1, making up an estimated profile of the energy stored in that **Electricity Storage Module**. Self-reference has been removed.

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Legal Text (2): Glossary & Definitions

GRID CODE SECTION	CODE REQUIREMENTS	DETAILS POST-CONSULTATION	COMMENTS/ WORDING TWEAKS- Suggested wording; narrative;
Glossary & Definitions	~~New definition:~~ ~~Import~~	~~Has the meaning set out in the BSC.~~	**FOR DISCUSSION AT WG13** If adopt suggested changes to **Bid Acceptance** and **Offer Acceptance**, no need for this new defined term in GC as would use import and export as used in the **BSC**. Therefore, have deleted.
Glossary & Definitions	New definition: **Maximum Delivery Offer (MDO)**	As defined in BC1.A.1.5 **Dynamic Parameters**.	
Glossary & Definitions	New definition: **Maximum Delivery Bid (MDB)**	As defined in BC1.A.1.5 **Dynamic Parameters**.	
Glossary & Definitions	New definition: **Offer Acceptance**	An acceptance by a **BM Unit** of a **Bid-Offer Acceptance** to increase its **Export** onto, or decrease its **Import** from, the **National Electricity Transmission System**.	**FOR DISCUSSION AT WG13** An acceptance by a **BM Unit** of a **Bid-Offer Acceptance** to increase its export onto, or decrease its import from, the **National Electricity Transmission System** where in this context import and export are as defined in the **BSC**.

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Legal Text (3): Balancing Codes

GRID CODE SECTION	CODE REQUIREMENTS	DETAILS POST-CONSULTATION	COMMENTS/ WORDING TWEAKS- Suggested wording; narrative; WG Member comment;
Balancing Code 1	APPENDIX 1 – BM UNIT DATA BC1.A.1.5 Dynamic Parameters **Delete Maximum Delivery Volume (MDV)**,	•~~Maximum Delivery Volume (MDV), expressed in MWh, being the maximum number of MWh of Offer (or Bid if MDV is negative) that a particular BM Unit may deliver within the associated Maximum Delivery Period (MDP), expressed in minutes, being the maximum period over which the MDV applies .~~	
Balancing Code 1	APPENDIX 1 – BM UNIT DATA BC1.A.1.5 Dynamic Parameters **Insert new Parameters for Short Duration assets**	•**Maximum Delivery Offer (MDO)**, being a series of MWh figures and associated times making up the profile of the maximum volume of **Offer Acceptance** by a **BM Unit** which can be instructed by **The Company** through **Bid-Offer Acceptances (BOA)** to the **BM Unit**, such that within the current **Balancing Mechanism Window Period**, the **BM Unit**'s **Committed Level** can be adhered to and contracted **Ancillary Services** can be delivered.	Updated in WG12 on 4th March and voted on A WG Member commented: believe that "**BM Unit Committed Level**" should be "**BM Unit's Committed Level**" – both "**BM Unit**" and "**Committed Level**" are defined terms, but the combined thing isn't – Now added into text
Balancing Code 1	APPENDIX 1 – BM UNIT DATA BC1.A.1.5 Dynamic Parameters **Insert new Parameters for Short Duration assets**	•**Maximum Delivery Bid (MDB),** being a series of MWh figures and associated times making up the profile of the maximum volume of **Bid Acceptance** by a **BM Unit** which can be instructed by **The Company** through **Bid-Offer Acceptances (BOA)** to the **BM Uni**t, such that within the current **Balancing Mechanism Window Period**, the **BM Unit' Committed Level** can be adhered to, and contracted **Ancillary Services** can be delivered.	Updated in WG12 on 4th March and voted on A WG Member commented: believe that "**BM Unit Committed Level**" should be "**BM Unit's Committed Level**" – both "**BM Unit**" and "**Committed Level**" are defined terms, but the combined thing isn't – Now added into text

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Legal Text (4): Balancing Codes

GRID CODE SECTION	CODE REQUIREMENTS	DETAILS POST-CONSULTATION	COMMENTS/ WORDING TWEAKS- Suggested wording; narrative; WG Member comment;
Balancing Code 1	APPENDIX 1 – BM UNIT DATA **Add BC1.A.11 section on Battery SoC Modelling**	BC1.A.11 **Electricity Storage Module Future State of Energy (FSoE)** Modelling BC1.A.11.1 **Generators** in respect of **Electricity Storage Modules** must provide asset specific relevant data when requested by **The Company** based on bilateral discussions to allow for modelling of **Future State of Energy (FSoE)** and the limits of operation that an **Electricity Storage Module** must obey. BC1.A.11.2 These models will be used for planning purposes beyond the end of the **BM Window** to the end of the time when interim data is available to **The Company**. The model must allow **The Company** to simulate the effect of a **Bid Offer Acceptance** and a **Physical Notification** on the **FSoE**. The requirements for **Ancillary** and **Commercial Services** within the model will be derived by **The Company** from auction data. The models are expected to have an accuracy of less than 10% up to four hours ahead and less than 20% between four hours and 33 hours ahead.	**FOR DISCUSSION AT WG13** BC1.A.11 **Electricity Storage Module Future State of Energy (FSoE) Modelling** BC1.A.11.1 **BM Units** must provide asset specific relevant data when requested by **The Company** based on bilateral discussions to allow for modelling of **Future State of Energy (FSoE)** and the limits of operation that an **Electricity Storage Module** must obey. BC1.A.11.2 These models will be used for planning purposes beyond the end of the **BM Window Period** to the end of the time when interim data is available to **The Company**. The model must allow **The Company** to simulate the effect of a **Bid-Offer Acceptance** and a **Physical Notification** on the **Future State of Energy (FSoE)**. The requirements for **System Ancillary Services** and/or **Commercial Services** within the model will be derived by **The Company** from auction data. The models are expected to have an accuracy of less than 10% up to four hours ahead and less than 20% between four hours and 33 hours ahead. Under BC1.A.11.2: to be consistent with the BC2 text, propose to use "**System Ancillary Services** or **Commercial Ancillary Services**."

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Legal Text (4): Balancing Codes

GRID CODE SECTION	CODE REQUIREMENTS	DETAILS POST-CONSULTATION	COMMENTS/ WORDING TWEAKS-Suggested wording; narrative; WG Member comment;
Balancing Code 2	BC2.5.3.4 **Add section for Revisions to Maximum Delivery Offer and Maximum Delivery Bid for a BM Unit**	BC2.5.3.4 Resubmissions to **Maximum Delivery Offer** (**MDO**) and **Maximum Delivery Bid** (**MDB**) for a **BM Unit** may only be made following **Gate Closure** for a **Settlement Period** in the event of: (a) The **BM Unit** no longer being able to achieve the previously stated value as a result of an unavoidable Event. Examples of such an Event include (but are not limited to) **Plant** breakdowns, or Events requiring a resubmission on safety grounds (relating to personnel or **Plant**); or (b) **The Company** issuing a **Bid-Offer Acceptance** (**BOA**) in respect of the **BM Unit**; or (c) The **BM Unit** fully utilising the energy reserved (or storage capacity for energy which was reserved) for delivery of **System Ancillary Services** or **Commercial Ancillary Services**; or (d) Submission of a change to a **Physical Notification** for the **BM Unit** under BC1.4.2(a) which covers the **Settlement Period** after the **Balancing Mechanism Window Period**.	**FOR DISCUSSION AT WG13** **Changes made** 'Resubmissions' instead of 'revision' at beginning 'Resubmission' instead of 'variation on safety….' Capitalised 'Event' MDO and MDB are designed to apply to all units; Propose insertion of clause in BC2.5.3.4 to the effect that: "(e) if a participant doesn't submit values by *11am each day for the next **Operational Day**** they will default to the previous value submitted until updated" *to reflect however it's written in the Defaulting Rules **GC Definition:** ****Operational Day =** The period from 0500 hours on one day to 0500 on the following day.

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Review Workgroup Report

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Agree Terms of Reference Met

GC0166 Terms of Reference

Workgroup Term of Reference
a) Implementation and costs;
b) Review draft legal text should it have been provided. If legal text is not submitted within the Grid Code Modification Proposal the Workgroup should be instructed to assist in the developing of the legal text;
c) Consider whether any further Industry experts or stakeholders should be invited to participate within the Workgroup to ensure that all potentially affected stakeholders have the opportunity to be represented in the Workgroup. Demonstrate what has been done to cover this clearly in the report; and
d) Consider EBR implications
e) Liaise with other industry groups regarding related information that Network Operators may require

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Possible Workgroup Vote

What is the Workgroup Vote?

To participate in any votes, Workgroup members need to have attended at least 50% of meetings. The vote shall be decided by simple majority of those present at the meeting at which the vote takes place (whether in person or by teleconference)
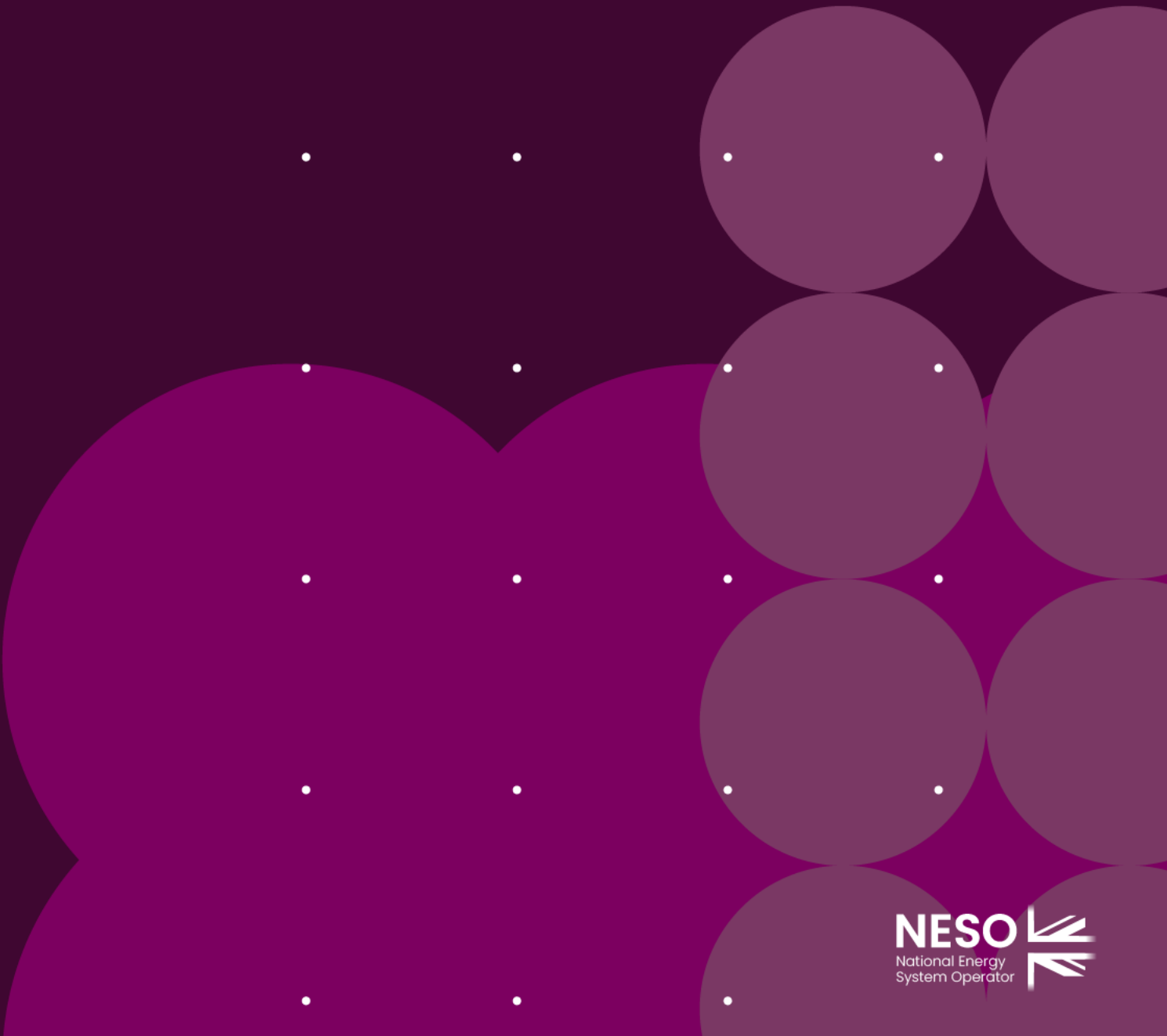
Stage 2 – Workgroup Vote

- 2a) Assess the **original** (GC0166 proposed solution) against the relevant Applicable Objectives compared to the **baseline** (the current Grid Code)
- 2b) Vote on which of the options is best.

Alternate Requests cannot be raised after the Stage 2 – Workgroup Vote

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For reference the Applicable Grid Code Objectives are:

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 E3.2(b)(i) and E3.2(b)(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*

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Action Update

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GC0166 Actions Review

Action Number	Workgroup Raised	Owner	Action	Due by	Status	Latest
32	WG11	SB	Clarify the code implementation and enactment timelines and provide an indicative schedule.	Status	Propose to Close	Note sent by NESO with intent to implement the solution on OBP Strategic. NESO can go live at anytime once once OBP Strategic is in.. NESO are to finalise the steps needed once EDL/EDT has been transitioned (from BM to OBP). Would then be waiting on Industry readiness. Need Industry to give us firm timelines on their readiness in order to send out a schedule for implementation. We could probably set this out at last workgroup. Re: the word *implementation* we need to be clear on what we mean.
33	WG11	HK/JH	NESO to provide written assurance alongside the proposal to Ofgem that the solution proposed will meet the requirements of the original submission.	Status	Propose to Close	Revised Modelling addresses this point- this has been circulated to Workgroup members including Ofgem. We believe that the proposed solution will meet the requirements of the original submission. Address challenges around how assets are dispatched efficiently and how to best plan for use of such units
34	WG11	HK/JH	Clarify multiple BMU's with single source of energy, single BMU with multiple sources of energy and single source of energy with Hybrid aggregated BMU	Status	Propose to Close	NESO to treat multiple BMUs with a single source of energy as individual units
35	WG11	HK/JH	Consider FSoE risks in terms of could no data be better than data that could change considerably.	Status	Propose to Close	See Open Concerns #2
36	WG11	SB	Extend the scenario diagrams to include period 4 to ensure clarity on responsibilities and permitted actions	Status	Propose to Close	Modelling sent to Workgroup on 24/02 Worked Example is in this pack
37	WG11	HK/JH	Consider impact on all asset types and how this could be managed through exemptions or otherwise.	Status	Propose to Close	For BMUs of longer duration- default value facility provided MDO and MDB are designed to apply to all units; Propose insertion of clause in BC2.5.3.4 to the effect that: "(e) if a participant doesn't submit values by *11am each day for the next Operational Day** they will default to the previous value submitted until updated"
38	WG11	HK/JH	Consult with the NESO market monitoring and compliance teams to ensure that the proposed solution for MDO/MDB parameters does not lead to unintended market consequences or breaches.	Status	Propose to Close	Done whilst creating Worked Example

GC0166 Actions Review

Action Number	Workgroup Raised	Owner	Action	Due by	Status	Latest
39		HK/JH	Define defaulting rules for MDO/MDB parameters.		Propose to Close	Defaulting rules are specified in the **Data Validation, Consistency and Defaulting Rules**. There is no change to the applicability of the Defaulting Rules. They define how data is 'defaulted' at 11am each day if no new data is submitted. In section 1.2 it states that the *defaulting rules are applied in cases of missing data which should have been submitted*. They apply at 11am each day. The obligation remains on the BM Unit to submit accurate MDO and MDB in the same way that the obligation sits with BM Units to submit accurate MEL, MIL, MNZT, MZT, etc. etc. As per 37
40	WG11	SB	Review and refine the legal text to include definitions for limited storage, the use of FSoE, and defaulting rules.	Status	Propose to Close	Spoke to Legal re: use of (**FSoE**) and suggested insertion as per Legal Text slide (1). Definitions for Limited storage to be considered when data is available. See Action 39 re Defaulting Rules As per 39 and 37
41	WG11	HK/JH/SB	Legal Text - consider the impact of including a statement that committed FPNs should be excluded from the calculation of MDO and MDB.	Status	Propose to Close	See tweaks suggested in: new definitions: **Future State of Energy (FSoE)** **Maximum Delivery Offer (MDO)**, **Maximum Delivery Bid (MDB)**

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AOB

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Next Steps and Close

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Timeline

Objectives

Review Alternative

Review Draft Legal Text

Review Workgroup Report

Possible Workgroup Vote

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GC0166 Workgroup 4	15/05/2024
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GC0166 Workgroup 10	12/11/2024
GC0166 Workgroup Consultation	18/11/2024 – 06/12/2024
GC0166 Workgroup 11	20/01/2025
GC0166 Workgroup 12	04/03/2025
GC0166 Workgroup 13	19/03/2025
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GC0166 Code Administrator Consultation	06/05/2025 – 06/06/2025
GC0166 Draft Final Modification Report to Panel	18/06/2025
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GC0166 Implementation Date	10 Business Days post Authority Decision

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Appendix

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Legal Text (1): Glossary & Definitions

GRID CODE SECTION	CODE REQUIREMENTS	DETAILS POST-CONSULTATION	COMMENTS/ WORDING AMENDMENTS- Suggested wording; narrative; WG Member comment;
Glossary & Definitions	New definition: **Balancing Mechanism Window Period**	Has the meaning set out in the **BSC**.	
Glossary & Definitions	New definition: **Bid Acceptance**	An acceptance by a **BM Unit** of a **Bid-Offer Acceptance** to decrease its **Export** onto, or increase its **Import** from, the **National Electricity Transmission System**.	**FOR DISCUSSION AT WG13** An acceptance by a **BM Unit** of a **Bid-Offer Acceptance** to decrease its Export onto, or increase its Import from, the **National Electricity Transmission System**, where in this context Import and Export are as defined in the **BSC**. Propose add words to negate need for Import and Export as defined terms
Glossary & Definitions	New definition **Energy Constrained BM Unit**	Any **BM Unit** which for any reason, apart from **Plant** failure, would not be able to fulfil a **Bid-Offer Acceptance** to declared Maximum Export Limit (MEL) or Maximum Import Limit (MIL) within the **Balancing Mechanism Window Period**.	**FOR DISCUSSION AT WG13** Added in WG12 on 4th March A WG Member suggested "for the duration of the **Balancing Mechanism Window Period**" NESO and other WG members believe this is not necessary as there is no reference to it in the proposed GC Text. Propose to remove
Glossary & Definitions	New definition: **Export**	Has the meaning set out in the **BSC**.	**FOR DISCUSSION AT WG13** If adopt suggested changes to **Bid Acceptance** and **Offer Acceptance**, no need for this new defined term in GC as would use Import and Export as used in the BSC. Creating Import and Export defined terms would entail bolding their use throughout the GC with possible unintended consequences. Propose to remove
Glossary & Definitions	New definition: **Future State of Energy (FSoE)**	For each **Electricity Storage Module**, the **Future State of Energy** is a series of MWh figures and associated times, which is calculated by **The Company** using the data provided under BC 1.A.11.1, making up an estimated profile of the energy stored in that **Electricity Storage Module**.	Updated in WG12 on 4th March and voted on. "For each **Electricity Storage Module**, this is a series of MWh figures and associated times, which is calculated by **The Company** using the data provided under BC 1.A.11.1, making up an estimated profile of the energy stored in that **Electricity Storage Module**." Propose Self-reference needs removal.

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Legal Text (2): Glossary & Definitions

GRID CODE SECTION	CODE REQUIREMENTS	DETAILS POST-CONSULTATION	COMMENTS/ WORDING TWEAKS- Suggested wording; narrative;
Glossary & Definitions	New definition: **Import**	Has the meaning set out in the **BSC**.	**FOR DISCUSSION AT WG13** If adopt suggested changes to **Bid Acceptance** and **Offer Acceptance**, no need for this new defined term in GC as would use import and export as used in the **BSC**. Creating Import and Export defined terms would entail bolding their use throughout the GC with possible unintended consequences. Propose to remove
Glossary & Definitions	New definition: **Maximum Delivery Offer (MDO)**	As defined in BC1.A.1.5 **Dynamic Parameters**.	
Glossary & Definitions	New definition: **Maximum Delivery Bid (MDB)**	As defined in BC1.A.1.5 **Dynamic Parameters**.	
Glossary & Definitions	New definition: **Offer Acceptance**	An acceptance by a **BM Unit** of a **Bid-Offer Acceptance** to increase its **Export** onto, or decrease its **Import** from, the **National Electricity Transmission System**.	**FOR DISCUSSION AT WG13** An acceptance by a **BM Unit** of a **Bid-Offer Acceptance** to increase its Export onto, or decrease its Import from, the **National Electricity Transmission System**, where in this context Import and Export are as defined in the **BSC**. Propose add words to negate need for Import and Export as defined terms

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Legal Text (3): Balancing Codes

GRID CODE SECTION	CODE REQUIREMENTS	DETAILS POST-CONSULTATION	COMMENTS/ WORDING TWEAKS- Suggested wording; narrative; WG Member comment;
Balancing Code 1	APPENDIX 1 – BM UNIT DATA BC1.A.1.5 Dynamic Parameters **Delete Maximum Delivery Volume (MDV),**	•Maximum Delivery Volume (MDV), expressed in MWh, being the maximum number of MWh of Offer (or Bid if MDV is negative) that a particular BM Unit may deliver within the associated Maximum Delivery Period (MDP), expressed in minutes, being the maximum period over which the MDV applies .	
Balancing Code 1	APPENDIX 1 – BM UNIT DATA BC1.A.1.5 Dynamic Parameters **Insert new Parameters for Short Duration assets**	•**Maximum Delivery Offer (MDO)**, being a series of MWh figures and associated times making up the profile of the maximum volume of **Offer Acceptance** by a **BM Unit** which can be instructed by **The Company** through **Bid-Offer Acceptances (BOA)** to the **BM Unit**, such that within the current **Balancing Mechanism Window Period**, the **BM Unit Committed Level** can be adhered to and contracted **Ancillary Services** can be delivered.	Updated in WG12 on 4th March and voted on A WG Member commented: believe that "**BM Unit Committed Level**" should be "**BM Unit's Committed Level**" – both "**BM Unit**" and "**Committed Level**" are defined terms, but the combined thing isn't A WG Member commented "Critical to add an "s" "**Acceptance**" to be clear it is multiple acceptances not just one."
Balancing Code 1	APPENDIX 1 – BM UNIT DATA BC1.A.1.5 Dynamic Parameters **Insert new Parameters for Short Duration assets**	•**Maximum Delivery Bid (MDB),** being a series of MWh figures and associated times making up the profile of the maximum volume of **Bid Acceptance** by a **BM Unit** which can be instructed by **The Company** through **Bid-Offer Acceptances (BOA)** to the **BM Uni**t, such that within the current **Balancing Mechanism Window Period**, the **BM Unit Committed Level** can be adhered to, and contracted **Ancillary Services** can be delivered.	Updated in WG12 on 4th March and voted on A WG Member commented: believe that "**BM Unit Committed Level**" should be "**BM Unit's Committed Level**" – both "**BM Unit**" and "**Committed Level**" are defined terms, but the combined thing isn't A WG Member commented "Critical to add an "s" "**Acceptance**" to be clear it is multiple acceptances not just one."

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Legal Text (4): Balancing Codes

GRID CODE SECTION	CODE REQUIREMENTS	DETAILS POST-CONSULTATION	COMMENTS/ WORDING TWEAKS-
Balancing Code 1	APPENDIX 1 – BM UNIT DATA **Add BC1.A.11 section on Battery SoC Modelling**	BC1.A.11 **Electricity Storage Module Future State of Energy (FSoE)** Modelling BC1.A.11.1 **Generators** in respect of **Electricity Storage Modules** must provide asset specific relevant data when requested by **The Company** based on bilateral discussions to allow for modelling of **Future State of Energy (FSoE)** and the limits of operation that an **Electricity Storage Module** must obey. BC1.A.11.2 These models will be used for planning purposes beyond the end of the **BM Window** to the end of the time when interim data is available to **The Company**. The model must allow **The Company** to simulate the effect of a **Bid Offer Acceptance** and a **Physical Notification** on the **FSoE**. The requirements for **Ancillary and Commercial Services** within the model will be derived by **The Company** from auction data. The models are expected to have an accuracy of less than 10% up to four hours ahead and less than 20% between four hours and 33 hours ahead.	**FOR DISCUSSION AT WG13** BC1.A.11.2 These models will be used for planning purposes beyond the end of the **BM Window** to the end of the time when interim data is available to **The Company**. The model must allow **The Company** to simulate the effect of a **Bid Offer Acceptance** and a Physical Notification on the **Future State of Energy** (**FSoE)**. The requirements for **System Ancillary Services** or **Commercial Services** within the model will be derived by **The Company** from auction data. The models are expected to have an accuracy of less than 10% up to four hours ahead and less than 20% between four hours and 33 hours ahead. Under BC1.A.11.2: to be consistent with the BC2 text, propose to use "**System Ancillary Services** or **Commercial Ancillary Services**."
Balancing Code 2	BC2.5.3.4 **Add section for Revisions to Maximum Delivery Offer and Maximum Delivery Bid for a BM Unit**	BC2.5.3.4 Revisions to **Maximum Delivery Offer** and **Maximum Delivery Bid** for a **BM Unit** may only be made following **Gate Closure** for a **Settlement Period** in the event of: (a)- The **BM Unit** no longer being able to achieve the previously stated value as a result of an unavoidable event. Examples of such an event include (but are not limited to) **Plant** breakdowns, or events requiring a variation on safety grounds (relating to personnel or **Plant**); or (b)- **The Company** issuing a **Bid-Offer Acceptance (BOA)** in respect of the **BM Unit**; or (c)- The **BM Unit** fully utilising the energy reserved (or storage capacity for energy which was reserved) for delivery of **System Ancillary Services** or **Commercial Ancillary Services**; or (d)- Submission of a change to a **Physical Notification** for the **BM Unit** under BC1.4.2(a) which covers the **Settlement Period** after the **Balancing Mechanism Window Period**.	**FOR DISCUSSION AT WG13** MDO and MDB are designed to apply to all units; Propose insertion of clause in BC2.5.3.4 to the effect that: "(e) if a participant doesn't submit values by *11am each day for the next **Operational Day*** they will default to the previous value submitted until updated" *to reflect however it's written in the Defaulting Rules **GC Definition:** ***Operational Day =** The period from 0500 hours on one day to 0500 on the following day.

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