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## Workgroup Consultation Response Proforma

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

Industry parties are invited to respond to this consultation expressing their views and supplying the rationale for those views, particularly in respect of any specific questions detailed below.

Please send your responses to [grid.code@nationalenergygyso.com](mailto:grid.code@nationalenergygyso.com) by 5pm on 09 December 2024. Please note that any responses received after the deadline or sent to a different email address may not receive due consideration.

If you have any queries on the content of this consultation, please contact Milly Lewis [Milly.Lewis@nationalenergygyso.com](mailto:Milly.Lewis@nationalenergygyso.com) or [grid.code@nationalenergygyso.com](mailto:grid.code@nationalenergygyso.com)

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<b>Which best describes your organisation?</b>	<input type="checkbox"/> Consumer body <input type="checkbox"/> Demand <input type="checkbox"/> Distribution Network Operator <input type="checkbox"/> Generator <input type="checkbox"/> Industry body <input type="checkbox"/> Interconnector	<input type="checkbox"/> Storage <input type="checkbox"/> Supplier <input type="checkbox"/> System Operator <input type="checkbox"/> Transmission Owner <input type="checkbox"/> Virtual Lead Party <input checked="" type="checkbox"/> Other

#### I wish my response to be:

(Please mark the relevant box)

☒ **Non-Confidential** (*this will be shared with industry and the Panel for further consideration*)

☐ **Confidential** (*this will be disclosed to the Authority in full but, unless specified, will not be shared with the Workgroup, Panel or the industry for further consideration*)

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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 (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*

### For reference, (for consultation questions 6 & 7) the Electricity Balancing Regulation (EBR) Article 3 Objectives and regulatory aspects are:

- a) *fostering effective competition, non-discrimination and transparency in balancing markets;*
- b) *enhancing efficiency of balancing as well as efficiency of national balancing markets;*
- c) *integrating balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security;*
- d) *contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector while facilitating the efficient and consistent functioning of day-ahead, intraday and balancing markets;*
- e) *ensuring that the procurement of balancing services is fair, objective, transparent and market-based, avoids undue barriers to entry for new entrants, fosters the liquidity of balancing markets while preventing undue market distortions;*
- f) *facilitating the participation of demand response including aggregation facilities and energy storage while ensuring they compete with other balancing services at a level playing field and, where necessary, act independently when serving a single demand facility;*
- g) *facilitating the participation of renewable energy sources and supporting the achievement of any target specified in an enactment for the share of energy from renewable sources.*

#### What is the EBR?

The Electricity Balancing Regulation (EBR) is a European Network Code introduced by the Third Energy Package European legislation in late 2017.

The EBR regulation lays down the rules for the integration of balancing markets in Europe, with the objectives of enhancing Europe's security of supply. The EBR aims to do this through harmonisation of electricity balancing rules and facilitating the exchange of balancing resources between European Transmission System Operators (TSOs). Article 18 of the EBR states that TSOs such as the ESO should have terms and conditions developed for balancing services, which are submitted and approved by Ofgem.

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Please express your views in the right-hand side of the table below, including your rationale.

Standard Workgroup Consultation questions		
1	Do you believe that the Original Proposal and/or any potential alternatives better facilitate the Applicable Objectives?	Mark the Objectives which you believe the Original Solution better facilitates:
		Original <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> C <input checked="" type="checkbox"/> D <input type="checkbox"/> E
		<p>We agree with the proposer's assessment.</p> <p>While we believe that using an asset-based model would lead to more opportunities to use energy limited assets to manage the Transmission System, and thus a better outcome for consumers, we have to accept NESO's assurance that its proposed solution gives it the appropriate and necessary information to maximise the capabilities of Limited Duration Assets (LDAs). We would like to understand who within NESO has signed off that this solution is suitable, and has accountability to this effect.</p>
2	Do you support the proposed implementation approach?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		<p>In order for this change to bring a benefit to NESO and storage assets, it needs to go into production as quickly as possible. We understand that while the change is planned to go live with a two-week lead time from a decision by the Authority, it would not start to be used for some time, in order for participants to deploy and test the software necessary to submit the required data to NESO.</p> <p>We note that any development that takes place prior to an Authority decision is proceeding at risk, as there is no guarantee that a specific (or, indeed, any) proposal will be approved by the Authority. This risk is magnified if alternatives are raised and considered. Mathematical models for calculating MDO and MDB will need to be independently developed by participants, and these models will be required to be automated, tested and deployed.</p> <p>Thus, we feel it unlikely that the industry as a whole will be ready to start using this solution two weeks after an</p>

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		<p>Authority decision. We encourage NESO to suggest a realistic date on which the MDO/MDB data will be required to be submitted by participants and will be used by NESO. We recommend that a realistic lead time is determined following consultation with EDL/EDT software providers.</p> <p>We understand that there has been discussion around a “soft launch” of these parameters. We do not object to this in principle, but recommend that this is discussed within the Workgroup and consulted on in the final proposal.</p>
3	Do you have any other comments?	<p>We encourage NESO to engage with vendors of EDL/EDT software as soon as possible. It will be impossible for Trading Points and Control Points to submit the necessary data to NESO without suitable software solutions, and we do not wish to see go-live of the solution delayed due to an inability to submit the required information to NESO.</p>
4	Do you wish to raise a Workgroup Consultation Alternative Request for the Workgroup to consider?	<p><input type="checkbox"/> Yes (the request form can be found in the <a href="#">Workgroup Consultation Section</a>)</p> <p><input checked="" type="checkbox"/> No</p> <p>Click or tap here to enter text.</p>
5	Does the draft legal text satisfy the intent of the modification?	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p> <p>There are a number of points where we believe the legal text is unclear. These are highlighted in our answer to questions 15-17.</p>
6	Do you agree with the Workgroup’s assessment that the modification does impact the Electricity Balancing Regulation (EBR) Article 18 terms and conditions held within the Grid Code?	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>Click or tap here to enter text.</p>

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7	Do you have any comments on the impact of the modification on the EBR Objectives?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Click or tap here to enter text.

### Specific Workgroup Consultation questions

8	Do you agree with the Proposer that the solution should be technology neutral or with several Workgroup members who thought the solution should be based on asset type?	<input checked="" type="checkbox"/> Technology neutral <input type="checkbox"/> Based on asst type
		We feel that requiring all participants to submit (or have defaulted on their behalf) is a sensible approach.
9	Are you clear on what is meant by limited/ unlimited?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Click or tap here to enter text.
10	Do you agree that MDO/ MDB are technical dynamic parameters	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<p>The differentiation between “technical” and “commerical” parameters is unhelpful. We believe that it is better to concentrate on specific rules around what the Trading Point / Control Point should submit for the asset.</p> <p>In the case of MDO and MDB, we believe that there are valid reasons for withholding some flexibility from the NESO, including:</p> <ul style="list-style-type: none"> <li>- Energy stored or headroom required in the storage facility required to deliver an Ancillary Service</li> <li>- Energy stored or headroom required in the storage facility to allow it to deliver a planned PN, which may not yet have become a FPN due to the relevant Settlement Period not having gate-closed.</li> </ul>

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		<p>The second point brings up a complex timing issue. NESO is able to issue BOAs at any time, and these BOAs must be accepted and followed unless certain narrowly-defined parameters relating to technical incorrectness or safety (in relation to people or plant) are met. If an energy storage facility has a discharge planned in a period which is about to gate close, it may be impractical to redispatch the asset and resubmit a PN in the event that NESO issues a BOA for a previous period which utilises the stored energy or headroom which was previously planned to be available. This can lead to a situation where NESO unintentionally cause a plant to be unable to deliver on a PN that has just gate-closed.</p> <p>While the optimiser could re-trade their position to avoid imbalance which they now know is inevitable, NESO would be forced to contend with a plant unexpectedly not delivering on its PN, a situation which could have been avoided, had NESO known that less energy were available to manage the system.</p> <p>In order to avoid this scenario, our preference is that resubmission of MDO/MDB is permitted to account for PNs which have been submitted for the immediately gate-open period. Thus, our view is that MDO and MDB are almost, but not quite technical parameters.</p>
11	Do you see there being an interaction between MIL/ MEL between MDO and MDB?	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p> <p>We believe that MEL/MIL and MDO/MDB are two different sets of constraints. MEL/MIL is a limit on power, and MDO/MDB is a limit on energy.</p>
12	Is it clear from the definition of FSoE that this should be calculated at the point where it can be imported/ exported to the Total System?	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>This is the standard for all other dynamic data under the Grid Code. We agree that it should be explicitly stated to avoid future confusion.</p>
13	Is it credible for the proposed level of	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>

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	FSoE accuracy to be achieved over the proposed time horizon (up to 33hrs)?	<p>Forecasting FSoE out to 33 hours does not need to be perfectly accurate – NESO need to be able to have confidence over a planning timescale that there will be sufficient flexibility available (or that they can make available through planning BOAs) to manage the Transmission System and provide sufficient margin. Allowing NESO to have this level of confidence will enable them to compare the expected cost of dispatching CCGT to provide margin with the expected cost of making energy storage facilities available (either by issuing BOAs to cancel generation or issuing BOAs to store energy in the run-up to peaks). This will allow energy storage to compete on a more level playing field with conventional generation and should reduce the “skip rate” associated with energy-only balancing.</p> <p>Can NESO please include the logic of how they have calculated the 10% and 20% accuracy levels and whether there needs to be provision to review these levels.</p>
14	How do you think NESO can/ should use FSoE and Asset Specific models in their system planning, considering market activity also continues within day, and commercial interactivity with operational "limits"?	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>NESO can use FSoE and asset-specific models to estimate the cost of making assets available or using their flexibility over the cardinal points where they need margin to manage the system. NESO can understand the volume of assets currently planned to be available, and the expected cost of cycling them.</p> <p>One shortfall in the model is the number of cycles that an asset is permitted to carry out in a day does not appear to be modelled. It may be that an optimiser has an upper limit on how much an asset can be used – either specified in a contract with an asset owner; or as a condition of insurance; or as a condition of the manufacturer’s guarantee on the asset. These will need to be taken into account, in order to ensure that NESO is not exposed to an unexpected reduction in flexibility.</p>



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		<p>Therefore, it should be provided alongside the other information for the Asset Specific models.</p> <p>We ask that NESO explain how they intend that the output of the asset-specific models will be used; and when the model logic will be ready for go-live.</p> <p>We ask that NESO assess whether the SCADA data currently being received which details live State of Energy is sufficiently accurate to use in these calculations.</p>
15	Is it clear whether FSoE is proposed or considered as either a 'technical' or 'commercial' parameter?	<p><input checked="" type="checkbox"/> Technical parameter <input type="checkbox"/> Commercial parameter</p> <p>We note that with the change to the proposed solution from the latest workgroup meeting, there does not appear to be a way to communicate a reduction in capacity to NESO as a result of breakdown, maintenance, testing or other unavoidable cause. Previously, this could have been communicated to NESO through changes to the maximum and minimum state of energy parameters.</p>
16	Is it clear from the definition of MDO and MDB that NESO can send multiple instructions up to the volume declared?	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>We are unclear as to the point in time when the measurement of the volume of BOAs which are compared to MDO and MDB resets. We believe that this should be on the resubmission of a new set of values following a Bid-Offer Acceptance being issued, but this does not appear to be explicitly stated anywhere.</p> <p>Any assumption made in relation to this should insulate participants which are not energy limited from having to make unnecessary submissions to NESO.</p>
17	Is it clear that the services referenced within the definitions of MDO and MDB are only during the BM Window?	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>We do not believe that this should be the case. For example: If an asset begins delivering an Ancillary Service during Settlement Period 15, its MDO and MDB volumes submitted for periods 12 through 14 must</p>



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		ensure that it will enter period 15 with sufficient charge or headroom to be able to deliver its contract with NESO.
18	Do the restrictions in BC2.5.3.4 strike the right balance between flexibility and operability?	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>The trade-off between flexibility and operability is required for this design of solution – given the overwhelming majority of liquidity on the intraday continuous power markets for GB is close to delivery, it must be possible for asset optimisers to be able to adjust their planned generation patterns for their assets right up to gate closure, as market prices move assets into and out of the money. Thus, in order to indicate to NESO that energy which originally was available has been sold, it must be possible for within-gate adjustments to MDO/MDB to be submitted.</p> <p>This does not necessarily remove flexibility from NESO, however. By way of example, consider a 20 MW asset with 10 MW of stored charge, which was originally planned to be neither charging nor discharging. If a PN for the gate closed period is entered, and the MDO is subsequently dropped from 10 to 0, it is still possible for NESO to access some of the flexibility: They would first need to issue a bid acceptance to cancel the planned discharge once it has gate closed. The optimiser would then increase their MDO across the entire gate closed window, opening up flexibility to NESO.</p> <p>This solution to accessing flexibility is somewhat inefficient, however, as it requires a series of submissions by the participant and NESO in turn, and NESO is relying on an enabling BOA to have the expected impact on the participant's MDO and MDB. A simpler solution would be to implement the FSOE model across all time periods, and allow NESO to calculate the impact of their BOAs on the SoC directly.</p>