

Public

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@nationalenergyso.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@nationalenergyso.com or grid.code@nationalenergyso.com

Respondent details	Please enter your details	
Respondent name:	Pete Noyce	
Company name:	Kraken	
Email address:	pete.noyce@kraken.tech	
Phone number:	07754203798	
Which best describes your organisation?	<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 Platform Provider to multiple market participants

I wish my response to be:

Public

(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)

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*
- a) *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;*

Public

- 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.

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 type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E
		The question is unclear. If the question is if there is a better alternative, we have not identified one that better fulfills NESO's vision for these parameters. Although we think more work is needed on the concept of Future State of Energy: how it will be used and how the values it	

Public

		provides will improve visibility for the system operator beyond data that is already available.
2	Do you support the proposed implementation approach?	<input type="checkbox"/> Yes <input type="checkbox"/> No We don't think there is sufficient detail in the consultation on implementation to give a view.
3	Do you have any other comments?	<p>We appreciate what NESO is trying to do with this change and think it will help NESO better utilise limited duration assets. We think the new parameters, particularly MDO/MDB, will be useful to NESO and will mean limited additional work for industry. We are less sure about the merits of Future State of Energy for the reasons we provide below. Overall, we think it will be vital for NESO and DESNZ to monitor the use of all asset types in the balancing mechanism and continue to upgrade its systems and optimisation to grow increasingly comfortable with balancing a dynamic system in real time and push for further decarbonisation of the balancing mechanism. NESO will also need to consider how it will need to evolve its systems under REMA.</p> <p>We would welcome more information on the data validation, consistency and defaulting rules. We would also stress that NESO will need to leave good time between a decision on the new parameters and their implementation. The recent update to the frequency response service terms left very little time between an Ofgem decision and the new terms coming into force.</p>
4	Do you wish to raise a Workgroup Consultation Alternative Request for the Workgroup to consider?	<input type="checkbox"/> Yes (the request form can be found in the Workgroup Consultation Section) X No Click or tap here to enter text.

Public

5	Does the draft legal text satisfy the intent of the modification?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Yes, although it would benefit from a tighter definition of what is meant by energy needed to satisfy ancillary service contracts. For example, is this CREV? If so, should this volume change as 'limited duration' assets respond to provide those services, including required energy recovery?
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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Click or tap here to enter text.
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 asset type In general we appreciate the arguments for and against technology neutral approaches. However, we can also see that these parameters are likely to be most valuable for BESS. The question for NESO then is to be clear on the cost of asking other assets to provide this information (could be negligible if values are defaulted), and whether
---	---	---

Public

		<p>there would be any disbenefit in its optimisation logic of asking only specific assets to provide that information. Overall though we do not see any major issues in asking all assets to provide this information.</p>
9	Are you clear on what is meant by limited/ unlimited?	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>To some extent the definition is clear. But we think the consultation could be clearer, e.g. by including the relevant bits of the grid code referred to on page 5. We disagree that being able to ‘fully deliver in the BM window’ should define whether an asset is limited or not, even for the purposes of this consultation. For instance, some ‘energy limited’ assets may be able to deliver at MEL/MIL for longer than 90 minutes but under half charge not. Or they may have been activated in previous windows, exhausting their energy supply until they can recharge.</p> <p>Applying these parameters to all asset types presumably negates the need to settle on a definition through this consultation, however.</p>
10	Do you agree that MDO/ MDB are	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>

Public

	technical dynamic parameters	<p>We agree that the technical/dynamic description summarises where the work group ended up on the parameters, i.e. that assets should make available all power not tied up in ancillary contracts but that these values might shift. Perhaps the more important question is whether they <i>should</i> be technical/dynamic. We think the spirit of the proposal at present is about right: giving the system operator as much visibility of power available (technical) while allowing the market to resolve issues itself as close to real time as possible (dynamic). NESO will naturally need to monitor how this develops and ensure these arrangements are striking the right balance and delivering value for consumers without deterring investment in critical flex resources.</p> <p>One challenge that might make the parameters less 'technical' is reflecting the volume of energy set aside for ancillary services and how this interacts with the BM. It is clear from the consultation that ancillary service activations are a valid reason for redeclaration of MDO/MDB, but it is currently unclear whether at the start of EFA blocks whether asset operators should use their contracted energy volume to produce MDO/MDB or another number. It is also unclear how assets that are activated to provide ancillary services within BM window should account for any energy recovery requirements within their ancillary service contracts when resubmitting MDO/MDB.</p>
11	Do you see there being an interaction between	<input type="checkbox"/> Yes <input type="checkbox"/> No

Public

	MIL/ MEL between MDO and MDB?	The consultation states that MDO/MDB should 'supersede' the 30 minute rule. Our understanding is that MEL and MIL would then become a semi-fixed 'technical' parameter, with MDO and MDB alone used to show energy volumes available in the balancing window. This is clear. What is less clear is how MDO and MDB should be calculated given they are time-limited values (BM window) and what power output they assume. If they assume power output at MEL/MIL then there are significant interactions between MEL and MIL and MDO/MDB. Whether or not these values are static (outside of technical issues/outages) or dynamic will significantly impact MDO/MDB calculations.
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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No The consultation suggests this but it could be clearer.
13	Is it credible for the proposed level of FSoE	<input type="checkbox"/> Yes <input type="checkbox"/> No

Public

	accuracy to be achieved over the proposed time horizon (up to 33hrs)?	<p>The consultation content reads as if NESO's expectation is that up to four hours ahead it will accurately predict the FSoE less than 10% of the time, and less than 20% of the time between 4 and 33 hours. This is surely a misreading as that level of accuracy would eliminate the case for building this model.</p> <p>If the consultation is trying to say that it will only be wrong around 10-20% of the time, we think this is unlikely. It will be difficult for NESO to accurately predict the state of energy because battery operation and optimisation is inherently dynamic. It's constantly changing to capitalise on different market needs. This is only likely to increase as our electricity system evolves and becomes more dynamic. On top of this, battery chemistry can make it tricky to very accurately calculate state of energy in the first place. We think it is unlikely NESO forecasts will be accurate.</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 type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>It is hard to give a concrete answer without more information on the FSoE models that NESO will have at its disposal, but we can appreciate why the system operator will be keen to have a clearer view of what energy will be available, where and when. It is less clear how FSoE would aid this understanding and what value it would provide beyond the data already available to NESO. We would welcome further clarity on precisely how NESO will form and use the models for all technology types, including demand response.</p> <p>In any case it will be crucial for NESO to over time use machine learning and historic data to improve its understanding of how the system behaves under different conditions and to allow it to operate effectively in an increasingly uncertain and dynamic system.</p>
15	Is it clear whether FSoE is proposed or	<p><input type="checkbox"/> Technical parameter <input type="checkbox"/> Commercial parameter</p>

Public

	considered as either a 'technical' or 'commercial' parameter?	It is unclear from the consultation what exactly NESO is proposing on FSoE and what technical and commercial parameters would mean in that context.
16	Is it clear from the definition of MDO and MDB that NESO can send multiple instructions up to the volume declared?	<div>X Yes</div> <div><input type="checkbox"/> No</div>
17	Is it clear that the services referenced within the definitions of MDO and MDB are only during the BM Window?	<div>X Yes</div> <div><input type="checkbox"/> No</div>
18	Do the restrictions in BC2.5.3.4 strike the	<div>X Yes</div> <div><input type="checkbox"/> No</div>

Public

	right balance between flexibility and operability?	Overall, we think within existing market frameworks the restrictions are likely striking a reasonable balance. It will be important to monitor this over time, however, to ensure they are delivering value for money for consumers.
--	--	--

