3 August 2023

Dear ESO,

GC0154: Incorporation of interconnector ramping requirements into the Grid Code as per SOGL Article 119

Thank you for the opportunity to respond to this Working Group consultation. This response is being made on behalf of the GB Interconnectors' Forum (GBIF) and is not confidential.

GBIF consists of representatives of approximately 30GW of operational and future electricity interconnectors into GB. There is currently 8.4GW of interconnection and this is expected to rise sharply over the next ten years, potentially meeting and exceeding the government's ambition of 18GW by 2030.

It is well established that electricity interconnectors are a critical part of the electricity infrastructure and will be a vital contributor to achieving net zero. They maximise renewable generation potential by enabling excess renewable energy to be exported to neighbouring countries rather than being curtailed. Interconnectors also have a key role to play in electricity security of supply, and in delivering lowest costs to consumers.

GBIF recognises the challenges that ESO faces in operating the system in a safe, secure and efficient manner as we move through the energy transition to net zero. Furthermore, GBIF recognises the unique challenges that interconnectors pose to connected system operators. Electricity interconnectors to GB are, by necessity, HVDC links and they are therefore some of the most flexible assets available to ESO. We have the opportunity to exploit this flexibility and develop solutions that help address some of the challenges that the ESO faces.

Unfortunately, standalone proposals like GC0154 will only serve to limit flexibility and will reduce the benefits interconnectors can provide to consumers. GC0154 may also impact on the viability of future interconnectors which has the potential to impact on net zero targets (time and cost) for both GB and EU, as more costly flexibility will be required as a result.

GBIF does not consider that the case for changing interconnector ramp rates has been made, and fundamentally disagrees with the outcome of the CBA that ESO commissioned to support the proposal. GBIF therefore disagrees with the proposal set out in GC0154. GBIF recommends that the alternative solution proposed by Workgroup Members is implemented.

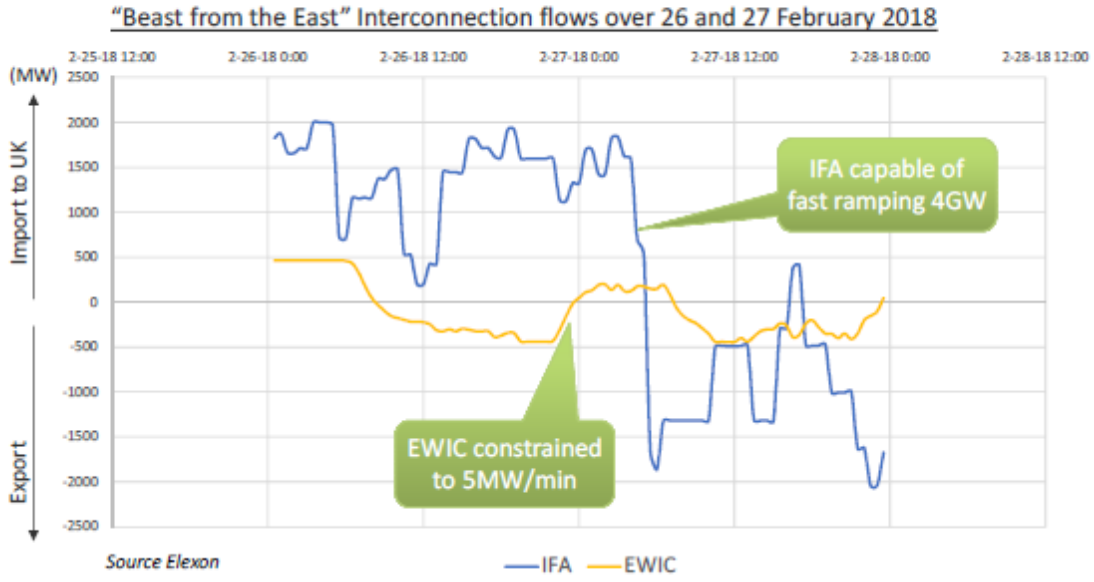
The completed Working Group Consultation Proforma is included as Appendix 1, and detail to support GBIF's position is provided below.

- It should be noted that whilst GC0154 as proposed would result in a significant change to interconnector operation, the short-term financial implications are not

considered to be significant to interconnector companies. The comments in this response are not driven by a desire to preserve interconnector revenues or reduce interconnector costs. Instead GBIF would urge ESO to work with interconnectors and other stakeholders to develop properly justified market-based solutions for interconnector operation that deliver benefits to consumers at both ends of the links.

- GBIF has reviewed the Ofgem decision letter of August 2019 (Implementation of the requirements listed in Article 118 and 119 of the SOGL Regulation: The Authority's decision) that prompted this proposal and does not conclude that Ofgem's decision envisaged a change to interconnector ramp rates. Instead, our interpretation is that Ofgem expected the current arrangements to be codified within the Grid Code and that was the reason why Ofgem considered that an Impact Assessment was not required.
- GBIF does not consider that sufficient evidence has been provided that simultaneous ramping of interconnectors causes operational problems. ESO has only presented a handful of specific examples and has not been able to quantify the cost of balancing actions it took during 2022 as a result of simultaneous ramping. GBIF also considers that the ESO should be able to foresee when interconnector ramping is going to take place – derived from the operational forecasting that it does, and this should then be factored into efficient operational decision making.
- GBIF considers that the CBA presented to support the ESO recommendation is fundamentally flawed. The Working Group report sets out (on pages 13 – 15) some of the concerns raised and GBIF does not consider that these concerns have been adequately addressed. Working Group members have also expressed concern about a lack of transparency on the methodology employed and the assumptions used. It is therefore disappointing that the ESO has been advertising the outcome of the CBA (for instance at the weekly Operational Transparency Forum) when it is clear that the majority of the working group members (in fact everyone but the ESO representatives) fundamentally disagrees with the outcome.
- GBIF can understand why halving interconnector ramp rates is considered to be an attractive solution by the ESO. However, GBIF considers this to be an extremely short-sighted view for the market and consumers as a whole. GBIF believes the ESO should be engaging with stakeholders to develop market-based solutions to the challenges that issues such as simultaneous ramping present and that properly developed market-based solutions will result in long term outcomes that are ultimately to the benefit to the consumer. GBIF considers that by pursuing this change purely under the governance of the Grid Code effectively ruled out any such market-based solutions due to the technical nature of this code.
- Key to the effectiveness of interconnectors is their capacity for swift power transmission adjustments (ramping up or down), which is indispensable for the efficient delivery of ancillary services. HVDC interconnectors, by virtue of their technical characteristics, can support rapid power flow changes to counterbalance the intermittency inherent in renewable generation. By limiting these technical capabilities, we risk jeopardising our energy supply's security. It is therefore crucial to optimise the use of these interconnectors, to ensure a consistent and secure energy supply as we progress towards a more renewable-centric energy landscape.

- We have already seen how this flexibility can positively contribute to security of supply in connected countries. As our renewable generation base increases there will be a corresponding increase in nonsynchronous power on our transmission networks and a higher degree of intermittency. HVDC interconnectors are well-suited to manage these fluctuations through the provision of ancillary services, particularly during exceptional stress events or abrupt load losses. This was evident during the 'Beast from the East' weather event in 2018. The diagram below shows how different interconnectors were able to react to system events, with interconnectors with higher ramp rates positively contributing to security of supply at both ends of the link.



- Weather depressions crossing our wind farms typically last 4-6 hours and their predictability can result in significant fluctuations in wholesale electricity prices. From a consumer's perspective, it is ideal to capture as much green power as possible and take advantage of potentially lower wholesale prices. However, constraining ramp rates can impede the realisation of these benefits, causing consumers to miss out on both efficient green power utilization and cost savings.
- GBIF considers that more meaningful engagement with EU TSOs is required before any change to ramp rates is implemented. The impact at the EU end of the links has not been considered, either in the CBA or by an assessment of the impact on the frequency quality (and hence security of supply). The Working Group report is unclear about the level and quality of EU engagement. The ESO should be engaging formally with the ENTSO-e System Operation Committee and in particular the subgroup system frequency and subgroup inter-synchronous areas before pursuing any change to interconnector ramp rates.
- GBIF notes that EU TSOs are starting to develop and employ smarter operational processes with cross-border assets such as grid-forming capabilities. GBIF members would be happy to work with the ESO to learn lessons from the EU and to consider the application of such techniques to GB borders.

GBIF is concerned that ESO is trying to force through a change that would represent a fundamental change to interconnector operation, without proper consideration, engagement or assessment. GBIF recommends that the requirements of retained EU law should be met by codifying the existing interconnector ramping parameters into the Grid Code as envisaged by the Working Group Alternative Proposal (and by Ofgem's original decision). Once this is done, a proper, holistic review of interconnector operation should be undertaken, including proper engagement with all affected stakeholders, to ensure that market-based solutions are developed that deliver benefits to consumers. The interconnector community, as represented by GBIF, is willing to engage constructively in such as exercise.

Please contact me if you would like to discuss any part of this response in more detail.

Yours faithfully

John Greasley
Chair, GB Interconnectors' Forum

Appendix 1

Workgroup Consultation Response Proforma

GC0154:

Incorporation of interconnector ramping requirements into the Grid Code as per SOGL Article 119

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@nationalgrideso.com by **5pm** on **03 August 2023**. 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 Catia Gomes catia.gomes@nationalgrideso.com or grid.code@nationalgrideso.com

Respondent details	Please enter your details	
Respondent name:	John Greasley	
Company name:	GB Interconnectors' Forum	
Email address:	John@interconnectables.com	
Phone number:	07908520002	
Which best describes your organisation?	☐Consumer body ☐Demand ☐Distribution Network Operator ☐Generator ☒Industry body	☒Interconnector ☐Storage ☐Supplier ☐Transmission Owner ☐Virtual Lead Party ☐Other

I wish my response to be:
(Please mark the relevant box) ☒Non-Confidential ☐Confidential

Note: A confidential response will be disclosed to the Authority in full but, unless agreed otherwise, will not be shared with the Panel or the industry and may therefore not influence the debate to the same extent as a non-confidential response.

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 5 & 6) 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.

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

<table>
<tr><th colspan="4">Standard Workgroup Consultation questions</th></tr>
<tr><td rowspan="4">1</td><td rowspan="4">Do you believe that the Original Proposal and/or any potential alternatives better facilitate the Applicable Objectives?</td><td colspan="2">Mark the Objectives which you believe each solution better facilitates:</td></tr>
<tr><td>Original</td><td>None</td></tr>
<tr><td>WA(G)CM1</td><td>All</td></tr>
<tr><td colspan="2">Please see justification in accompanying letter</td></tr>
<tr><td rowspan="2">2</td><td rowspan="2">Do you support the proposed implementation approach?</td><td colspan="2">☐Yes
☒No</td></tr>
<tr><td colspan="2">GBIF does not support the implementation approach for the original proposal, but does for the Alternative</td></tr>
<tr><td>3</td><td>Do you have any other comments?</td><td colspan="2">Please see comments in accompanying letter</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">Do you wish to raise a Workgroup Consultation Alternative Request for the Workgroup to consider?</td><td colspan="2">☐Yes
☒No</td></tr>
<tr><td colspan="2">GBIF supports the Alternative raised by Workgroup members</td></tr>
<tr><td rowspan="2">5</td><td rowspan="2">Do you agree with the Workgroup's assessment that GC0154 does impact the Electricity Balancing Regulation (EBR) Article 18 terms and conditions held within the Grid Code?</td><td colspan="2">☒Yes
☐No</td></tr>
<tr><td colspan="2">The original impacts negatively, the alternative impacts positively</td></tr>
</table>

6	Do you have any comments on the impact of GC0154 on the EBR Objectives?	☐Yes ☒No
		Please see comments in accompanying letter

Specific Workgroup Consultation questions		
7	Does the Original proposal or the alternative impact EU TSOs?	☒Yes ☐No Click or tap here to enter text.
8	Has there been sufficient effort taken to seek and obtain European engagement? Other- if other what else could have been done?	☐Yes ☒No Please see justification in accompanying letter
9	Does the Original proposal / alternative allow for GB to reach its net zero targets?	☐Yes ☐No Original – No. Limiting the flexibility of interconnectors will not help reaching net zero targets Alternative - Yes
10	Do you believe the Original proposal or alternative impacts the interconnector business model? (Please consider any commercial and operational impacts)	☐Yes ☐No Original – yes Alternative – No, but allows for a proper assessment of interconnector operation in the future
11	Does the Original proposal / alternative meet the requirements of Ofgem's August 2019 decision on the implementation of the SOGL? (Check if this is incorporated in grid code objectives)	☐Yes ☐No Original – no. GBIF does not consider that Ofgem expected a change from the current ramping limits Alternative - Yes

12	Do you believe that the Original/alternative solves the operational challenges faced by the ESO as a result of fast simultaneous interconnector ramping?	☐Yes ☐No Please see comments in accompanying letter. GBIF does not consider that the operational challenges as a result of fast simultaneous ramping have been adequately demonstrated
13	Do you believe the Original proposal or alternative proposal/s impacts or is impacted by the EU 15 MTU change?	☒Yes ☐No There is the potential, and further engagement with EU TSOs is required to assess this properly.
14	Do have any comments on the reliability of the CBA conducted by Baringa? If available, please provide any analysis supporting your response.	☒Yes ☐No GBIF considers the CBA to be fundamentally flawed – see comments in accompanying letter
15	Are there any considerations for implementation on the Original proposal /alternative proposals? (e.g., IT impacts or considerations)	☐Yes ☒No Click or tap here to enter text.