

# Emergency and Restoration Summary of System Defence Plan and System Restoration Plan consultation comments

20 August 2019

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# 1

## Introduction

# Thank you for your feedback

From July to August 2019, the ESO published draft Emergency and Restoration proposals for a consultation following a request for amendment from Ofgem in June 2019.

We would like to thank you for taking the time to respond to the second consultation. We appreciate your input and have given careful consideration to the feedback provided.

The amended System Restoration Plan, System Defence Plan and Terms and Conditions for providers will be published on our website and submitted to Ofgem.

Included in the following document are ESO responses to your feedback, which aims to communicate our responses with reasoning to the points you have raised.

ESO are currently working to implement this into the GB industry through Grid Code modifications GC0125, GC0127 and GC0128. Further code modifications will be raised in due course. We would appreciate further engagement through the GB Code forums and JESG.



# 2

## Feedback and Responses

# ESO responses to your feedback

Number	Respondent	Comment	ESO Response
1	Elexon	<ol style="list-style-type: none"> <li>1) Remove reference to BM Participants and the BSC</li> <li>2) Update text with regard to Market Suspension rules</li> </ol>	<ul style="list-style-type: none"> <li>- Agree – documents updated</li> </ul>
2	Northern Powergrid	<ol style="list-style-type: none"> <li>1) Confusion on the use of the term GB SGU (Significant Grid User). There is a general view that do we need to use the term “GB SGU” or SGU and if so do we need to use this term in the Grid Code and then have the confusion of EU Code User’s and GB Code User’s</li> <li>2) Measures to be taken by the DNO should be in the Grid Code rather than a specific notification.</li> <li>3) General typo’s and consistency issues</li> <li>4) Interaction with GC0096 on Storage. Should storage disconnect from the System or stop importing.</li> <li>5) Concern that the ESO are not implementing</li> </ol>	<ul style="list-style-type: none"> <li>- SGU Agree term can be removed</li> <li>- Requirements to be included in Grid Code will come under the auspices of GC0127/GC0128</li> <li>- Typo’s and consistency will be addressed.</li> <li>- The approach adopted to storage is the same as that concluded as part of the EU Expert Group and this approach was also discussed as part of the GC0127/GC0128 work.</li> <li>- How Storage is treated (be it new, existing, embedded etc.). For new the requirements of GC0096 would apply. For existing, the requirements as specified in the Bilateral Agreement</li> </ul>

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| <p>E&amp;R by having a very short cycle time so that automatic tripping of storage units becomes the default.</p> <p>6) Issues raised on how the Grid Code would apply to Storage retrospectively – especially those existing plants which do not fall under the requirements of GC0096.</p> <p>7) SDP – Section 3.2.2 – Concern raised that the LFDD scheme in Grid Code and NCER are not the same.</p> <p>8) SDP – Section 3.4.7 – Concern raised that LFDD applies country wide.</p> <p>9) SDP Section 7.1 – Comment raised – should the test plan be in the Grid Code and if so should it be included in GC0127/GC0128.</p> <p>10) SDP – Section 7.3 – when does the obligation start for completed compliance tests and should it be in the Grid Code.</p> <p>11) Are any changes required in the</p> | <p>would apply. For non CUSC parties (i.e. Embedded Storage) the NCER (as currently proposed would not apply).</p> <p>- The LFDD scheme as required under NCER is not the same as GB (Table CC/ECC.A.5.5.1a). Because the demand in England and Wales is significantly greater than Scotland at 48Hz approximately 52% of National Demand will be lost which would be compliant with the requirements of the European Network Code.</p> <p>- The ESO are currently assessing this and preparing a high level Test Plan for submission by December 2019. Any obligations on User's will then be placed in the Grid Code (via GC0127/GC0128) or on</p> |
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		<p>Grid Code for December 2019. It is assumed these will be included in GC0127/GC0128.</p> <p>12) Appendix A – System Defence Plan – will all requirements be within the Grid Code or within the Bilateral Agreement.</p> <p>13) Suggested Table B1 in Appendix B should be written with respect to GB Parties.</p> <p>14) SDP – Appendix C- confusion over the term priority.</p> <p>15) SDP Appendix D - IDNO's should be added to the list.</p> <p>16) SDP Appendix E – Definitions should be in full rather than refer to the Grid Code.</p> <p>17) SDP – Appendix E – Definition of EU Code User needs to take the implementation of Storage into account.</p>	<p>Transmission Licensees via the STC.</p> <ul style="list-style-type: none"> <li>- Additional compliance tests and obligations are covered in GC0127/GC0128. These are detailed in the notification letter which will be discussed at the next GC0127/GC0128 workgroup meeting scheduled for 22 August 2019.</li> <li>- In general, the requirements will be in the Grid Code other than the trip settings for storage when the plant is operating in a mode analogous to demand. This requires further discussion amongst the Workgroup.</li> <li>- Comments on definitions will be addressed.</li> </ul>
3	Energy Networks Association	<p>1) Creation of the concept of GB SGU is confusing. It would be better to use the term GB affected party.</p>	<ul style="list-style-type: none"> <li>- The issue of who is within the scope of NCER is the subject of an Alternative which requires discussion. Any requirement to</li> </ul>

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| <p>2) The point has been noted that what is proposed is broadly the minimum – although a smaller footprint still could have been achieved by simply incorporating new requirements into the code. Most of the plan is a statement of what already underpins the existing emergency arrangements.</p> | <p>extend the scope will result in additional cost which requires further consideration. The concern is that if opened up more widely, there is a risk that implementation of NCER will not be completed in time. Having sought advice from the National Grid Legal Team, they agree and support the Proposers view.</p> |
| <p>3) The ESO should only notify those parties who are affected by the E&amp;R Code with clear obligations in the Grid Code.</p>   | <p>- The notification process and additional obligations have been detailed in a draft notification letter which will be discussed at the next GC0127/GC0128 Workgroup meeting on 22 August.</p>   |
| <p>4) Concern over the treatment of Storage Units and the obligation to trip. There is also concern how embedded storage and existing storage units would be treated.</p>  | <p>- The issue of Storage Units is noted above (ie is tripping the correct approach, what type of storage units are within the scope of the modification (ie New, Existing, Embedded etc)</p>  |
| <p>5) Confusion with regard to consistency between the Grid Code and SDP/SRP.</p>  |  |
| <p>6) Questions over terminology and</p>   |  |
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| <p>low voltage demand disconnection.</p> <p>7) Confusion over the definition between an SGU and Defence Service Provider. It is also noted that the ESO will not be seeking the assistance of Embedded Generators who are not SGU's and this needs to be made clear.</p> <p>8) Concerns raised over the test plan in terms of both how and when it should be in place and what obligations are required in the Grid Code if any.</p> <p>9) Table B1 of the SDP (Appendix B) should be reformatted so it is clear what obligations apply to GB parties. A flow diagram may be more useful.</p> <p>10) Table B1 of the SDP (Appendix B) there is no clear distinction between existing and new.</p> <p>11) SDP Appendix C – It is not clear what arrangements would apply to</p> | <p>and should the requirements be in the Grid Code or Bilateral Agreement.</p> <ul style="list-style-type: none"> <li>- The Plans will be updated to make it clear who is within the scope of the mod using GB terms and ensure consistency across the documents. To this end the definition of SGU has been removed from the System Defence Plan and System Restoration Plan.</li> <li>- The Test plan remains an issue. The ESO view is that this should be subject to internal procedures; however, the wider view is that this should be in the Grid Code and STC. The ESO are currently considering the preparation of a high-level Test Plan (which will be prepared by 19 December 2019) with specific obligations on GB parties being</li> </ul> |
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		<p>high priority Significant Grid User's</p> <p>12) Appendix D – Update and refer to DNO Licenses on Ofgem's website.</p> <p>13) Concern over who are Restoration Service Providers and the relationship with SGU's. There is also concern over the relationship between Non-CUSC Parties who are part of a Local Joint Restoration Plan.</p> <p>14) Typo's and grammatical errors.</p>	<p>specified in the Grid Code or STC.</p> <ul style="list-style-type: none"> <li>- Table B1 in Appendix B has been reformatted to make it clearer.</li> <li>- The requirements applicable to High Priority Significant Grid Users is unclear. This has been addressed and updated.</li> <li>- Appendix D updated in line with comments.</li> <li>- Clarification has been provided that non CUSC parties who fall outside NCER can still be involved in an LJP.</li> <li>- Typos and grammatical errors corrected.</li> </ul>
4	Drax Enterprise Limited	<p>1) SDP Section 2.1 states that the System Defence Plan procedures will be activated when in emergency conditions, however it is not entirely clear that this refers only to parts of this document and other section such as Section 3 System Protection Schemes are</p>	<ul style="list-style-type: none"> <li>- SDP updated to provide clarity on the definition of Emergency conditions.</li> <li>- Treatment of Storage – this is the same issue as highlighted above. We believe the NCER gives sufficient flexibility to treat storage in this way.</li> <li>- The GB LFDD Scheme does not meet the Annex in NCER. This</li> </ul>

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| <p>active all the time.</p> <p>2) Concerns over the approach to storage in GB and is tripping rather than power reversal a permitted approach.</p> <p>3) SDP Section 3.2.2<br/>- The existing GB LFDS does not meet the NCER requirements.</p> <p>4) SDP - Section 8 given that the notifications have still not taken place, Article 12(6) gives each DSO, SGU and Defence Service Provider up to 12 months to implement from notification and as such parties may not be able to implement all the first stage Articles as described by the 18 December 2019. The same issue also applies in the System Restoration Plan.</p> <p>5) SDP Section 3.2.6<br/>- There only appears to be a minimum voltage level of 0.85 pu set for synchronising is there a voltage difference limit?</p> | <p>issue has been clarified and due to the significantly higher demand in England and Wales than Scotland over 50% of demand will be tripped at 48Hz and therefore will be compliant with the NCER.</p> <p>- The Notification process is late. The ESO initially felt that publication of the SDP and SRP was sufficient, however it has since come to light that a formal notification process is required. This has been prepared in draft form and will be discussed with Stakeholders at the GC0127/GC0128 meeting on 22August. No significant changes over and above existing practice are required other than the minor amendments detailed in the draft letter. It is however acknowledged</p> |
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			<p>that this is an issue in terms of GB parties being able to implement the requirements in the timeframes required.</p> <ul style="list-style-type: none"> <li>- The voltage difference limit is the voltage range specified in CC/ECC6.1.4 of the Grid Code.</li> </ul>
5	EDF Energy	<ol style="list-style-type: none"> <li>1) More detail is requested on the minimum change proposal. Appendix A states the GB suite of Industry Codes and documents will be updated so that GB parties complying with the GB Industry Codes and documents will automatically comply with the requirements of the NCER. More detail is requested on these updates.</li> <li>2) Requests for formal feedback on this and previous consultations requested.</li> <li>3) EU should be added before NCER to imply it is driven by the European Energy Third Package.</li> </ol>	<ul style="list-style-type: none"> <li>- The minimum change proposals and the amendments to the code have been included in the draft notification letter which will be discussed with GC0127/GC128 meeting on 22 August.</li> <li>- We are very sorry that no formal feedback was received from the previous response. We hope this table will address the issues raised by yourselves and other Stakeholders.</li> <li>- Document updated to include EU before NCER.</li> </ul>

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6	SP Energy Networks	<ol style="list-style-type: none"> <li>1) Not easy to establish if the requirements of the NCER (Art 11 and Art 23) are fully incorporated into the System Defence and System Restoration Plan.</li> <li>2) Concept of GB SGU is introduced which is confusing</li> <li>3) Mix of terms between DNO's and DSO's.</li> <li>4) Consistency and abbreviation of NETS SQSS rather than just SQSS.</li> <li>5) SDP – Section 2.1.1 – clarify third bullet – At least one secured event leads to a violation of the security limits.</li> <li>6) SDP – Section 3.1.5 – Storage – which type of storage units are in scope, new, existing, embedded and/or those contracted to provide frequency response. It is also noted that Storage relates to the GC0096 proposals which</li> </ol>	<ul style="list-style-type: none"> <li>- Incorporation of NCER into the System Defence and System Restoration Plan is covered through the GC0127/GC0128 Mapping Table. However, we acknowledge that the EU NCER is vague and interpretation between the ESO and various stakeholders is a challenge. That said we agree some significant issues exist particularly interpretation particularly around which parties in GB are within Scope of EU NCER, how storage should be treated, the low Frequency Demand Disconnection Scheme being consistent with EU NCER and the test plan. Many of these issues are a reoccurring theme from the other responses received above and have largely been addressed.</li> <li>- Typo's and grammatical errors corrected.</li> </ul>
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- as yet are unapproved.
- 7) SDP – Section 3.2.2 – Low Frequency Demand Disconnection in Annex to the NCER is not the same as in GB and some form of review will be required.
  - 8) SDP Section 7.1 – Test Plan – should this not be detailed in the Grid Code and STC. TO’s also need to be involved in the consultation.
  - 9) SDP Section 7.2.2 , 7.2.3, 7.2.6 and 7.2.7 need to be codified in the Grid Code.
  - 10) SDP Section 7.2.8, 7.2.9, 7.2.10, 7.2.11 need to be codified in Grid Code or STC.
  - 11) SDP Section 7.3 – Obligation on the test report needs to be put in the Grid Code
  - 12) SDP – Appendix A – Conflict with settings for tripping Storage when in a mode analogous to demand. Should this requirement be placed in the
- The ESO are considering this further but one suggestion is for the ESO to prepare a Test Plan at a high level by 18 December 2019 with specific obligations defined in the Grid Code and STC as relevant.
  - Compliance tests have been added to the Grid Code via GC0127/GC0128. The additions have been included in the draft notification letter.
  - Trip Settings for Storage when in a mode analogous to Demand need to be determined. This requires further consideration but at the present time follows the same convention as pumped storage. Clarification also needs to be made as to whether this requirement is in the Grid Code or Bilateral Agreement.
  - The list of DNO’s and IDNO’s has been updated as
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<p>Grid Code or BCA?</p> <p>13) SDP – Appendix B – First line – what “requirements” is the text referring to.</p> <p>14) SDP – Appendix B Obligations on Storage Units – Inconsistency between requirements in Grid Code and Bilateral Agreement.</p> <p>15) SDP – Appendix D – List of DNO’s / DSO’s.</p> <p>16) SDP – Appendix E – Mix of approaches in Glossary and Definitions. Some refer to Grid Code, some are extracts from the Grid Code.</p> <p>17) SDP Appendix E – Definition of DSO and / or DNO</p> <p>18) SDP Appendix E – EU Code User implementation dates for Storage are unknown which is contingent on the approval of GC0096</p> <p>19) In GB TSO’s also include TO’s.</p> <p>20) Typo’s and corrections</p>	<p>per Mike Kay’s comment.</p> <p>- Glossary and Definitions will be updated to improve consistency including DNO. The term DSO and SGU has been removed from the SDP and SRP.</p> <p>- Implementation dates for storage are contingent upon GC0096. It is expected that this will be approved before the final approval of the SDP and SRP but this requires further discussion.</p> <p>- Appendix F of the System Restoration Plan has been updated in line with comments received.</p>
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## System Restoration Plan

- 1) Many of the comments on the System Restoration Plan are similar to the System Defence Plan. The additional elements over and above the System Defence Plan are noted here.
- 2) SRP – Appendix F (List of TSOs and DSOs Responsible for Implementing System Restoration Plan Measures) – Why is this different from the approach in the System Defence Plan.

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