

Distribution Code Consultation Response Proforma

DCRP/20/06/PC: Distribution Code Storage Modification

Stakeholders are invited to respond to this consultation, expressing their views or providing any further evidence on any of the matters contained within the consultation document. Stakeholders are invited to supply the rationale for their responses to the set questions.

Please send your responses and comments by **17:00, 12th February 2021** to dcode@energynetworks.org and please title your email 'Consultation Response DCRP/20/06/PC DCode Storage Modification'. Please note that any responses received after the deadline may not receive due consideration by the Working Group.

Any queries on the content of the consultation pro-forma should be addressed to DCode Administrator on 020 7706 5105, or to dcode@energynetworks.org

Respondent	Antony Johnson (Antony.Johnson@Nationalgrideso.com)
Company Name	National Grid ESO
No. of DCode Stakeholders Represented	Not applicable
Stakeholders represented	Not applicable - ESO
Role of Respondent	Electricity System Operator
We intend to publish the consultation responses on the DCode website. Do you agree to this response being published on the DCode website? [Y/N]	Yes

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	Question	Response
Q1	Do you agree with the general intent of the proposed modification? If not, please explain your views.	Yes
Q2	Do you agree that the proposed modifications satisfy the applicable Distribution Code objectives? If not, please explain your concerns.	Yes – We agree that modification supports objectives (a), (b), (c) and (d) of the Distribution Code Objectives, by providing clarity to developers on the technical requirements applicable to storage devices and ensuring equitable treatment with other User's. We also agree that item (d) is fulfilled by ensuring consistency with EU Codes, particularly the Emergency and Restoration Code.
Q3	Do you agree with the approach to a timed future implementation and do you agree with the suggested date?	Yes – we agree that that proposed implementation date of 1 September 2022 is appropriate noting that the requirements on Storage Developers in the Grid Code applies from any developer of a storage plant who connects to the System on or after 20 May 2020 and has placed contracts for their main plant items on or after 20 May 2019. We also note the proposals of the European Storage Expert Group were issued in the Summer of 2020 and believe this provides sufficient time for developers to meet the proposed requirements.
Q4	Do you agree with the inclusion of mandatory cessation of active power import, and change to generating mode, on falling frequency and do you agree with the thresholds suggested? If you disagree, please explain why.	<p>Yes – We believe this reflects the requirements of Article 15(3)(a) of the EU Emergency and Restoration Code and also provides greater resilience and robustness to the Total System as a defensive measure. We also note that this approach is consistent with the recommendations of the EU Expert Storage Group published in the Summer of 2020. We do however acknowledge this proposal (as has been noted in the consultation) was not included in Grid Code Modification GC0096 but it is proposed to be introduced as part of Grid Code Modification GC0148 (Implementation of EU Emergency and Restoration Code Phase II).</p> <p>We would however note that it would be worth giving some consideration to repeated response and the performance of Storage Plant upon recovery of System Frequency.</p> <p>In terms of repeatability of response, we suggest that it may be useful to use similar words to that in CC/ECC.A.3.5 "When a Electricity Storage Module has responded to a significant Frequency disturbance, its response capability must be fully restored as soon as technically possible. Full response capability should</p>

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	Question	Response
		<p>be restored no later than 20 minutes after the initial change of System Frequency arising from the Frequency disturbance”.</p> <p>In terms of the performance of the storage plant when responding to rising frequencies after a low frequency event this is a more complex area requiring further consideration. We will be considering this as part of the GC0148 Grid Code consultation however I attach a diagram below which shows our initial view of how a storage plant should behave when system frequency starts to rise following a low frequency disturbance. Our initial view is that if at the time of the lowest frequency, a storage plant is operating at point X shown in the diagram, it should continue to follow the trajectory of the black dotted line. There could be a number of operating points which all follow a trajectory parallel to the black dotted line. In addition, we would also stipulate that there should be no sudden changes in power output either at specified frequencies or at certain time periods. This issue is quite complex and one which we think will require further assessment as part of the GC0148 Workgroup.</p>

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	Question	Response
		<p>Storage</p> <p>NOT TO SCALE</p> <p>Maximum Export Capacity</p> <p>Power Import / Power Export</p> <p>Maximum Import Capacity</p> <p>48.0 48.5 48.8 49.0 49.5 50.0</p> <p>System Frequency (Hz)</p> <p>Post Disturbance Acceptable Response</p>
Q5	Do you agree with the general approach taken to V2G requirements? If not, please state what you think is incorrect and inappropriate and please suggest any alternative approaches.	Yes – We agree with this approach and believe it is also consistent with the proposals suggested as part of the European Expert Storage Group.
Q6	Do you foresee that V2G will be needed for EVs of under 3.6kW registered generating capacity? If so, this would require appropriate drafting to be included in G98.	No – not at an individual level. However we would note that where there are a large number of installations of less than 3.6kW in aggregate this could have a significant impact on the Total System and hence this approach may require further consideration.

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	Question	Response
Q7	Do you agree that DNOs should insist on formal Equipment Certificates for vehicle manufacturers to demonstrate compliance of V2G capabilities? If you disagree, please explain why.	This is a sensible approach.
Q8	Do you have any comments on the proposed EVCP, Heat Pumps, V2G application form (Appendix 3) or the proposed connection process flowchart (Appendix 2) for all domestic customers?	No
Q9	What do you think of the proposed digitalisation plan outlined in the introduction and do you have any feedback or suggestions on the minimum functional requirements the app should have?	Yes - We are fully supportive of a proposed digitalisation though we would note that rather than being prescriptive on a mobile App it may be better to have a portal system so the data can be supplied via any number of technologies.
Q10	Do you agree that the data requirements relating to storage technologies etc should be left to the DCRP working group [Data Exchange Working Group] on data exchange provisions to resolve?	Yes
Q11	Do you have any comments on the proposed legal text drafting?	<p>Clauses 11.1.1(b), 12.1.1(b) and 13.1.1(b) refer to Electricity Storage Power Generation Modules. We think it may be better to use the term "A Power Generating Module that incorporates an Electricity Storage Device" which has been used in other parts of G99.</p> <p>Appendix 3 is not clearly highlighted in the consultation document.</p>

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Please provide comments relating to the specific technical content of the proposed modifications¹

Page / line No	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
						See comments above.

¹ Add more rows if required