

Distribution Code Consultation Response Proforma

DCRP/PC/18/04: Implementation of the EU Network Code Requirements for Generators

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 on 23 February 2018** to dcode@energynetworks.org and please title your email 'Consultation Response DCRP/PC/18/04 DC0079'. Please note that any responses received after the deadline may not receive due consideration by the DNOs.

Any queries on the content of the consultation pro-forma should be addressed to DCode Administrator on 020 7706 5124, or to dcode@energynetworks.org

Respondent	<i>Thorsten Bülo</i>
Company Name	SMA Solar Technology AG
No. of DCode Stakeholders Represented	1
Stakeholders represented	<i>SMA Solar Technology AG</i>
Role of Respondent	<i>Manufacturer of PV and Battery Inverters</i>
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]	Y

	Question	Response	
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Q1	Do you believe that DC0079 better facilitates the appropriate Distribution Code objectives? If not, why do they fail to do so?		
Q2	Do you support the proposal to increase the immunity level on type tested plant as specified in Annex 2 and 3	We agree to increasing the immunity level in order to increase overall system stability	
Q3	In particular do you agree that manufacturers of type tested plant should comply with these changes by 1 July 2018?	Testing of all inverters in the specific market and the implementation of probably necessary modification of certain inverters needs time and the test results of the University of Strathclyde show that the risk with the actual technology seems low. At the same time, the European wide implementation of the RfG Grid code lead to extensive effort on testing several new requirements. There is the risk, that after implementation, test and declaration of conformity, in a short other modifications are necessary, which are not public today. Therefore, we propose to let the requirements take effect on April, 27, 2019	The intention to implement the change requirements in summer 2018 were announced and communicated to manufacturers in Autumn 2017. Based on this, and the urgency in arresting the increase in system risk, the WG recommends that the change is implement in July 18 as proposed.
Q4	Are there any additional manufacturing costs associated with these requirements? If so what are what are they and what is their proportion to the existing cost? Please provide evidence (in confidence if necessary).		
Q5	Do the proposed changes facilitate efficient connection and operation of distributed generators? If not, why do they fail to do so?		
Q6	Do the proposed changes introduce any material risks for distributed generators? What are these risks? And have they been		

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	or will they be appropriately mitigated?		
Q7	Do the proposed changes impose any additional material risks on the system operator, eg reduced stability margins, reduced reactive capability margins, or difficulty in managing transmission system voltages? If yes, please highlight these risks.		
Q8	Do the proposed changes impose any additional material risks on distribution network operators, eg stability and security issues safety risks, or any additional investment that might be neither economic nor efficient? If yes, please highlight these risks.		
Q9	Do the proposed changes adequately protect the interests of all distribution network users? If not, why do they fail to do so?		
Q10	Are there further technical considerations to be taken into account? If yes, please highlight these technical considerations.		
Q11	Is there any evidence that Users will be inappropriately or adversely affected by the changes proposed? If so, please provide details.		
Q12	Do the modifications proposed strike an appropriate balance between the needs of generators, DNOs, transmission licensees, and other interested parties? If not, why do they fail to do so?		
Q13	Please provide any other comments you feel are relevant to the proposed change.	Vector shifts of up to 50 degrees at nominal Voltage may result in significant saturation	The WG understands the point, and is also aware that from the testing that Strathclyde

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		<p>currents of 50Hz-Transformers in and therefore in tripping of overcurrent protection.</p> <p>It should be questioned, if the requirement of 50 degrees VS at full Nominal voltage is a realistic scenario. In the consultation documents, the simulated VS events come along with LVRT-Events which may reduce the stress on the equipment.</p>	<p>have undertaken some inverters seem to perform better when the retained voltage is higher. It is realistic for some system events that high vector shifts will not necessarily be accompanied by significant voltage reductions. This is a complex area and the WG believes that this is worthy of much deeper investigation with stakeholders and manufacturers in an expert group that National Grid is currently setting up to review all aspects of fault ride through requirements on all generation plant of all sizes, in relation to its ability to ride through transmission faults. This WG would encourage SMA to participate in, or track the workings of, the proposed expert group.</p>
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