Response to Digitalised Whole System Technical Code Consultation 1

Name	Alan Creighton
Job Title	Senior Smart Grid Development Engineer
Organisation	Northern Powergrid
Contact Details	alan.creighton@northernpowergrid.com

We have summarised the main points of this consultation response below:

- We agree that there is merit in reviewing the accessibility of the technical codes for stakeholders.
- The focus should be on increasing the accessibility of the codes to make them easier to understand, rather than changing or simplifying the technical requirements themselves.
- It is important to clearly understand the issues that distribution system users have with the existing codes as well as those that transmission system users have, as there is a broad cross section of stakeholders that would be affected by changes to existing codes.
- As part of the project NGESO should demonstrate the proportionality of the emerging solutions to ensure that the stakeholder benefits associated with them outweigh their implementation costs. To achieve this, there is a need to better understand the issues stakeholders have with the present codes and the tangible benefits that would be delivered by the solutions.
- We agree that there are some "no regrets" activities that can be started before there is a decision from BEIS / Ofgem regarding the Energy Code Reform (ECR), but any work on amalgamating the technical codes should wait until there is clarity of the enduring solution arising from the ECR.
- We will work to support the project with the expectation that, until there is clarity from the ECR, changes will be focussed on the review and digitisation of the existing codes under the existing code governance arrangements.

Q1. What challenges do you have with using the technical codes?

Northern Powergrid, as an informed user of the Grid Code and Distribution Code, does not experience any particular challenges when using the technical codes. However, we are aware that some stakeholders have difficulties accessing the codes and understanding the technical obligations that apply to them. We agree that it is important for stakeholders, including developers of technologies that will help GB meet its Net Zero targets, find the technical requirements for connection and operation of equipment both accessible and understandable.

We recognise that NGESO has engaged with stakeholders but we are unsure of the extent to which demand and generation stakeholders that already have connections to, or who would be seeking connections to, distribution networks have engaged with this process. It is important to note that there are significantly more customers connected to distribution networks than to the transmission network, so their thoughts are particularly important.

It is essential that there is transparency of the feedback received from all stakeholders regarding the issues that they find with the existing codes.

Q2. Where there are challenges, please provide examples of areas where you would like to see change.

We agree that it is important for the challenges or problems faced by stakeholders and the materiality of those problems to be understood. It is only when those problems are fully

understood that solutions can be developed to address them. We think that it is important that a schedule of the problems identified, together with their materiality, is developed so that solutions can be mapped against the most material problems. Unless there is clarity and transparency of the 'problem to be solved' at this stage of the project, there is a risk that solutions developed and implemented do not meet stakeholders' expectations.

Q3. Are there further advantages and disadvantages of the potential solutions above?

Whole System Technical Code ("WSTC") solution

As indicated in our response to Q2, without a clear view of the 'problems to be solved' it is difficult to assess the extent to which the two proposed solutions outlined in the consultation i.e. consolidation/alignment and digitisation would help, so forming a view of any further advantages and disadvantages is difficult.

Whilst we can see that consolidation/alignment and digitisation may form part of a package of solutions, further development and clarification of these solutions is required to form a view of their merits.

We understand that, as this consultation is the initial consultation, it is reasonable for potential solutions to be presented at a high level and that further detail will be presented as the project develops. Consequently, we think it would be appropriate to pose Q3 again in a later consultation when there is additional clarity on the 'problem to be solved' and how the potential solutions would address those problems.

In relation to the four headline options, we have the following comments:

Do Nothing - Without fully understanding stakeholders' concerns it is not clear that this would not be acceptable in conjunction with other solutions e.g. digitisation of the existing codes as separate codes and providing increased guidance and explanation specifically aimed at stakeholder groups would be an initial step.

Align the technical codes on key issues - We agree that similar and related requirements in the Distribution Code and Grid Code should be aligned. Indeed, this was the approach taken when implementing the EU Network Codes. Of the two examples cited in the consultation:

- the security standards have limited implications for non-network operator stakeholders, so may be of limited value, and
- the enforcement of technical compliance is more of a commercial than a technical issue, particularly as there is already a high degree of alignment in this area following the introduction of the EU Network Codes.

Develop an overarching WSTC and retain existing codes - This option appears to develop a third code to sit alongside the Grid Code and Distribution Code, which has the potential to introduce further confusion for stakeholders and additional administrative burden.

Develop a single WSTC - We would like to further understand NGESO's thinking in this area, for example whether 'simplification' implies relaxing the current technical requirements or just explaining them more clearly. We would be concerned about relaxing the technical requirements. We can see that some technical requirements may now be redundant but the majority of the technical requirements exist to address technical issues and to ensure the safety and integrity of the transmission and distribution systems. We can see advantages in expressing the technical requirements more simply rather than relaxing them just to make them more understandable. Explaining the technical requirements more simply is something that could be carried out for the existing codes rather than as part of the development of new WSTC.

We are aware that there are some areas of the codes which may be redundant and these should be identified and removed. Such a review is also something that could be carried out for the existing codes rather than as part of the development of the new WSTC.

Digitisation solution

We agree with NGESO that the term 'Digitisation' can be interpreted differently by different stakeholders and that it is important to develop a shared understanding of the various digitisation options and how they would address the problems identified by stakeholders.

We can see that each of the options, other than Do Nothing would have benefits for stakeholders.

We agree with the points made in the consultation that licence changes would be required if existing technical codes were replaced with a new WSTC.

Q4. Which of the issues identified in section 2, (or by yourself in answer to Q1) would be addressed by each of the solution options?

Please see our response to Q2 and Q3.

Q5. Are there additional potential solutions for whole system alignment which could deliver value?

We agree that the spectrum of the options has been considered. Sub-options may well emerge as work progresses.

Q6. Are there additional potential solutions for digitalisation which could deliver value?

We agree that the spectrum of the options has been considered. Sub-options may well emerge as work progresses.

Q7. Which of the potential solution(s) for digitalisation do you see as providing the most benefit?

As part of the project NGESO should demonstrate the proportionality of the emerging solutions to ensure that the stakeholder benefits associated with them outweigh their implementation costs.

It seems clear to us that an artificial intelligence driven platform would bring the most benefit to stakeholders, but this option would be complex, time consuming and expensive to develop initially and maintain on an enduring basis. Given that consumers would ultimately bear these costs, it is important to understand whether the initial and enduring costs associated with this option are greater or less than the benefits to consumers. It is likely that some of the other options may have a more attractive cost / benefit balance and would deliver better value for money for end consumers.

Q8. What risks and/or opportunities do you see in digitalising codes in parallel to work on code alignment, potential consolidation, and the Energy Codes Reform programme? Please also share your views on how best to mitigate these risks.

We believe that it is important to establish via stakeholder engagement the level of digitisation that they would value and also to establish an understanding of the resources that would be required to deliver that level. Ideally there would be a consistent approach across the Grid Code and Distribution Code, but this should be influenced by the views of stakeholders

connected to the transmission and distribution networks respectively. It is probably reasonable to assume that the level of digitisation would be consistent between the NGESO WSTC initiative and the BEIS/Ofgem ECR initiative, hence digitising codes in in advance of an ECR decision is likely to be a low risk activity, assuming that the digitisation platforms were interoperable.

Q9. Do you think the digitalised codes should be legally binding or for guidance only? Why?

Our preference is that there should be a definitive 'hard copy' of the technical codes that can be used for regulatory compliance purposes and hence that a digitised code would provide stakeholder guidance. The definitive document would be the version that is formally governed and referenced in the transmission and distribution licences. To rely on a digitised definitive version for a particular stakeholder, particularly if it was a 'stakeholder friendly version' produced by AI, would expose the system to risks associated with digitisation errors, coding, version control and governance. For example, if a filtered 'stakeholder friendly version' of the Grid Code incorrectly omitted the need to comply with Fault Ride Through capability, this could expose the transmission system to additional stability risk.

Q10. Do you see value in progressing these work packages independently of the ECR and do you think they should be progressed?

We can see value in progressing with 'no regrets' work packages, including:

- Providing clearer explanation of the technical requirement in the Grid Code and Distribution Code independently. Further clarity is needed on the point raised in the consultation that the Grid Code and Distribution Code have different levels of complexity. For example, in the Distribution Code there is significant detail in the Annex 1 documents. We agree that this work could progress via the existing governance arrangements.
- Whilst we agree in principle that there would be merit in ensuring that areas of non-alignment between Grid Code and Distribution Code were removed, providing tangible examples of such issues would help us understand the scope of this activity.
- We agree that the Grid Code and Distribution Code could be digitised independently via the existing governance arrangements provided that the platforms used were interoperable to facilitate amalgamation in the future as appropriate.

It is difficult to see what problem would be solved by incorporating SQSS in to the Grid Code. It is worth noting that EREC P2 is already included in the Distribution Code as an Annex 1 standard.

Q11. Are there other opportunities that could be considered?

In order to improve stakeholders' understanding of technical requirements, there could be merit in producing and maintaining a set of guidance material aimed at specific stakeholder groups. Increasing the knowledge across the stakeholder community of the technical requirements and the reason for their inclusion in the codes will be essential as the connection to and operation of transmission and distribution networks becomes more complex and as more customers become proactively engaged with network operation.

Q12. Stakeholders have articulated that there is strong interdependence between options in whole system code consolidation or alignment (Section 3.1), digitalisation (Section 3.2) and the delivery of solutions (Section 3.5). Do you have a preferred combination

of these solutions that you see as delivering the best value considering the issues implementing the solutions? Please provide a rationale for your response.

As mentioned in our response to Q3, we are of the view that further detail of the various solutions and the problems that they solve is required, together with a view on the associated costs and benefits, before a 'best value' solution can be established. We would expect the project to develop a view of the 'best value' option as it progresses.

As mentioned in the consultation document there are many ways that this work could progress and phases by which it could be implemented. The implementation of any work should be informed by the sound understanding of the problems to be solved, their materiality and the cost effectiveness of the solutions / sub-solutions.

Q13. Are there other aspects of the project delivery where you see risks and opportunities to mitigate these?

We think that the biggest risk to the project is the availability of stakeholder resources with sufficient knowledge to complete the work. The Grid Code and Distribution Code are legal documents and stakeholders have legal and contractual obligations to comply with them. The existing code text has been developed by industry experts and subject to consultation, i.e. it has all been carefully drafted. Changing the codes without going through a similar process could have unintended legal and commercial consequences for stakeholders if not done carefully and subjected to proper review and governance. Although we will continue to support the development of industry and technical codes as best as we can, it is unclear whether stakeholders generally have sufficient resources to implement the project as envisaged.

Q14. Do you agree with the key benefits outlined above and can you see other benefits resulting from this project?

In our response to Q2 we indicated that there needs to be further clarity on the problems that we are looking to solve and how they would be addressed by the various solutions. The benefits need to be linked to the problems.

We agree that digitising and making it easier for stakeholders to understand their technical obligations would be beneficial.

We are not convinced that a WSTC would be beneficial to the owners or operators of small and medium power stations, as the vast majority of these installations would be connected to the distribution system and therefore only need to refer to the Distribution Code. We think it is important to engage with this stakeholder group and seek their views.

Whilst technical changes affecting the Grid Code and Distribution Code currently require a joint working group to be established this has in the past only created a small administrative burden for the Code Administrators and has little or no impact on stakeholders - in effect a joint working group is a 'Whole System Technical Code' working group.

We are not convinced that a WSTC would be quicker to change than the present arrangements as the speed of making code changes is a function of the governance process rather than the technical scope or content.

Q15. Do you think that the proposed governance structure will enable delivery of the project? Would you change any aspects? If so, why?

If there is a decision to develop a new WSTC based on the existing codes, we can see that the governance structure proposed in the consultation seems reasonable. However, depending on

the implementation approach such a structure may not be required for some of the early 'no regrets' solutions to be implemented. For example, each code could be digitised independently under the existing code governance, although we recognise that agreement would be required between the code administrators to ensure that the platforms used were interoperable.

Q16. Which elements of the project would you, or your organisation, like to be involved in? If so, please state what capacity, and provide a short description of the perspective and value that you would bring to the project.

As a licenced distribution network operator, we have an obligation to ensure that the Distribution Code complies with the requirements specified in standard condition 21 of the licence. Consequently, we would want to have an involvement in the Steering Group, relevant Work Groups and also maintain our current code governance support.

Q17. What principles should apply when forming membership and ways of working for the various project groups?

The project and stakeholders supporting the project should act independently in the best interests of GB to implement the existing, or potentially revised, Grid Code and Distribution Code objectives.

Q18. What are your views on the proposed Terms of Reference for the steering group?

We have previously provided feedback to NGESO on the terms of reference which have been included in the consultation document. However, having read the consultation document, we would like to suggest the following additions to the terms of reference:

- Review the feedback from consultations.
- Establish the material issues identified by stakeholders and map them against the set of solutions and sub-solutions.
- Establish a phased road map for the implementation of the solutions that offer value for money.
- Consult with stakeholders on the road map.
- Liaise with BEIS and Ofgem to ensure alignment with ECR thinking.
- Develop a detailed phased plan for the initial work.
- Consider the availability of resources to carry out the work.
- Consider the scope of the works e.g. inclusion of standards referenced in the Grid Code (e.g. the Relevant Electrical Standards) and the Distribution Code (Annex 1 and Annex 2 standards).

Q19. Do you have further views on how to best include all the relevant perspectives in the governance of the project?

We have no further comments to add at this stage.

Q20. How do you think the steering group should make decisions, particularly if there is

	not consensus?
	In the event that the stakeholder group is unable to reach a consensus on a required decision, then decisions should be based on a majority view, but ultimately the group could defer to BEIS / Ofgem for guidance.
Q21.	**What are your views on the proposed stakeholder engagement? Is there more that can be done to ensure effective stakeholder engagement?**
	We can see that NGESO has engaged and proposes to continue to engage with stakeholders, but we have a concern that there has been limited engagement with stakeholders with connections to the distribution network and that these proposals could have a material impact on them.
Q22.	**Would you like to attend the webinars? If so, please leave your contact details in your feedback.**
	We would plan to attend relevant webinars.
Q23.	**Would you like to request a regular update from the project at your forum? If so, please leave contact details of your forum in your feedback.**
	We would expect to receive formal updates via the Grid Code and Distribution Code Panels.
Q24.	**What are your views on the proposed schedule?**
	Our only observation is that it could be difficult to mobilise a steering group meeting before 17 December 2021, given that the consultation closes on 12 November 2021 and there will be a need to review the consultation responses, unless the steering group is to be involved in setting the initial direction.

This consultation is available online here:

https://www.nationalgrideso.com/industry-information/codes/digitalised-whole-system-technical-code

Please return responses to box.wholesystemcode@nationalgrideso.com before 5pm on 12th November 2021.