# Digitalised Whole System Technical Code (dWSTC)

February 2022

# Analysis of Consultation Responses

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# Contents

# 1. Background

National Grid Electricity System Operator (NGESO) RIIO-2 business plan included a proposal to consider developing a digitalised Whole System Technical Code (WSTC) encompassing the existing Distribution Code (and associated Engineering Recommendations (ERECs)) and Grid Code. NGESO committed to ensure that there was engagement from industry on the direction of this work from the outset. In line with this commitment, stakeholder engagement commenced in June 2021 gathering views on the project's scope, objectives and approach which formed Consultation 1. The consultation gave an opportunity for stakeholders to formally provide their views on the proposed digitalised WSTC. It was released in September 2021 and closed in November 2021.

A total of 25 responses were received: 12 written only, 8 verbal only with 5 stakeholders providing both written and verbal responses. Some members of the steering group expressed concerns that this number was too low to establish the desire from industry for major change.

A broad range of stakeholders provided responses; DNOs (4), NGESO (1), IDNO (1), Distribution Code Parties (1), Grid Code Parties (6), Wider Industry (2), Consumer Groups (1), Trade Associations (4), Distribution Code Administrator (1), Transmission Owner (3) and OFTO (1). Although only one response was received from the Distribution Code Parties, the Trade Associations who also represent this category, submitted 4 responses.

The purpose of this document is to give a summary of the digitalised WSTC Consultation 1 responses, clearly articulate the problems identified by stakeholders, put forward solutions proposed by stakeholders and map those proposed solutions against the problems identified. This document also proposes recommendations developed for the Steering Group to vote on. A summary of the problems, proposed solutions and recommendations is provided in Table 17, Table 18 and Table 19.

# 2. Glossary of Terms

### Alignment

Alignment is the process by which areas of the Distribution Code (and ERECs) and Grid Code that are not aligned, in intent or execution, are identified and then modifications to the relevant code panel are raised via the normal code governance process to correct these. Areas where codes are not aligned may be within each code itself (e.g., the Grid Code) or between different codes (e.g., the Grid Code and Distribution Code).

### Consolidation

Consolidation is the process by which the Grid Code and Distribution Code (and ERECs) are merged together to produce a single technical code that Users connected to either the transmission or distribution systems would be legally bound to comply with.  The creation of a consolidated code should not change any obligation on any code party.

### Digitalisation

Digitalisation is the process of presenting either the existing PDF based Grid Code and Distribution Code (and ERECs) or their consolidated equivalent code in a new digital format in order to improve the experience of the code users. The presentation of a PDF based code in a digital format would not change any obligation on any code party.

### Rationalisation

The task of streamlining undue detailed prescription and removing any irrelevant or outdated information.[1]

### Scoping Document

The Scoping Document(s) will detail what the project actually entails based on the selected proposed solutions as voted on by the Steering Group. The document should take into account what can be technically delivered, the timescales and what benefits would be delivered.

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[1] From Energy Code Reform Consultation published by Ofgem/BEIS page 41
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/828302/reforming-energy-industry-codes-consultation.pdf

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**Self-Service**

A 'smart search' that enables market participants to retrieve information from the code that is relevant to them.

**Self-Service with cross-code signposting**

In addition to self-service, the platform would provide a function that can signpost a user to other relevant codes in which they might have obligations.

**Simplification**

The task of translating code requirements (where possible) from technical prescriptions and legalese into plain English and establishing outcome-based regulation into new rule design[2].

**User Guidance Document**

A User Guidance Document is a stand-alone document that provides the code user with additional help to understand and navigate the codes. A User Guidance Document is applicable for both digitalised and PDF based codes.

**User Journey**

A 'User Journey' is a process that a User follows to achieve a specific objective e.g. connecting new equipment to the electricity distribution or transmission system; or proposing a modification to either the Distribution Code or Grid Code. This improvement for accessing the codes is about how the user experiences the codes and is independent of how the code is administered or how it is structured.

The identified User Journeys would be displayed on a 'front page' from which they could select one. It would guide the user through a series of questions. Based on the answers to these questions, the system will filter the clauses in a digitalised code to display only those that are relevant to the user for that particular User Journey.

Examples of User Journeys if the codes were digitalised:

- **Connecting new equipment to the transmission system.** If a User were to select this User Journey from the front page of the system, they would then be asked about the equipment they were seeking to connect e.g. "What would you like to know about connecting equipment?" The user could then select from a list of options that might include:
  - "I want to know about design criteria" or
  - "I want to know about the process for getting connected" or
  - "I want to know about things I'll have to do once I'm connected". Further user-based questions could be asked to further filter the clauses until a selection of clauses can be displayed.

- **Proposing a modification to the code**. If a user were to select this User Journey from the front page of the system, they would then then be asked further questions so the clauses could be filtered until they are presented with the clauses in the code that relate to modifying the code (i.e., governance rules).

Further work needs to be done to identify all the possible User Journeys and agree which ones should be included. In addition to improving navigation of the codes, the User Journeys would also mean that a user would not need to read more of the code than necessary as each clause would have tags relevant to the type of user it applies to and the journeys.

User Journeys are only applicable to digitalised codes, the equivalent for PDF based codes is User Guidance Document/s. User Journeys are likely to give a better customer experience.

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[2] From Energy Code Reform Consultation published by Ofgem/BEIS page 42
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/828302/reforming-energy-industry-codes-consultation.pdf

# 3. Introduction

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

Figure 1 represents stakeholder responses regarding the challenges of using the technical codes.
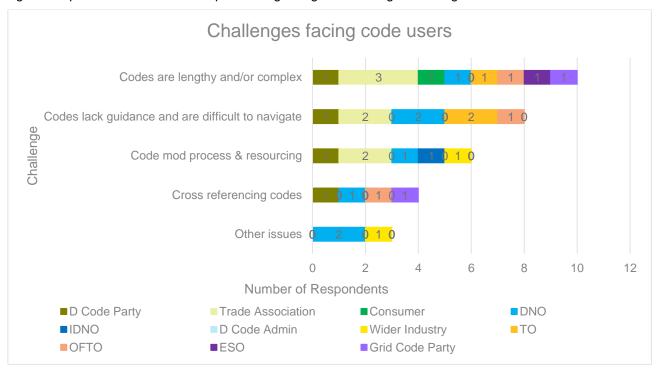


*Figure 1: Challenges of Using the Technical Codes*

**Analysis**: Some well-established stakeholders in industry such as Network Operators and parties with large generation portfolios, indicated that they do not have challenges with using the codes, but they acknowledge that the newer entrants do experience a number of difficulties with the codes.

For any given user the enormity, language used, and complexity of the codes makes understanding what they need to do difficult to both find and understand. This is a very important conclusion and of itself is justification for action. Where there were challenges, they were across both distribution and transmission broadly fell into the seven categories below:

**Issue 1**   The codes are very lengthy and not the easiest of documents to understand, especially for new entrants.

**Issue 2**   The codes are overly complex and difficult to comprehend, resulting in difficulty in interpreting the meaning of certain clauses.

**Issue 3**   The codes lack clarity and can be confusing for new users.

**Issue 4**   It is difficult for industry participants to understand their obligations from the codes

**Issue 5**   The codes are difficult to navigate

**Issue 6**   The code modification process is resource intensive, cumbersome, lengthy, and not closely aligned with other codes.  The issue is that many of the smaller players likely to play an important part in Net Zero will be disenfranchised and see the codes as a barrier to the necessary change.

**Issue 7**   There are a number of administrative points, including scope changes, duplication etc.  The separate technical codes have duplications, which can result in contradictions and in the need for compliance across multiple codes and thus complicates the compliance process.

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See Table 20 for extracts from stakeholder responses to their challenges faced with using the technical codes.

It is these areas that set out the problems that should be addressed by the steering group, and it is important that any solutions progressed map on to one or more of these issue areas.

**Ask of Steering Group:** Ensure solutions selected are addressing challenges detailed in this section.

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

Table 1 shows examples given by stakeholders where they would like to see change in the way the codes are constituted.

*Table 1: Areas Proposed for change*

| ID | Areas proposed for change | # of respondents |
|---|---|---|
| 1 | Provide guidance documents | 4 |
| 2 | Have code filtering to retrieve only applicable clauses | 4 |
| 3 | Restructure codes to 'key themes' or 'user journeys' | 2 |
| 4 | Provide more information where codes cross-reference other codes | 2 |
| 5 | Make it easier to follow code modifications via website | 1 |
| 6 | Include ENAs 'DG Connection Guides' in consideration | 1 |
| 7 | Use plain language | 1 |
| 8 | Remove duplication | 1 |
| 9 | More concise/compact codes | 1 |

**Analysis**: The feedback given by respondents is an indication that they think the navigation of the codes needs to be simplified. No respondent identified a specific clause or section of the code where improvements could be made. The areas of improvement proposed by stakeholders are summarised in Table 1.

In addition to the solutions proposed by stakeholders in their responses, the Steering Group has proposed an additional solution to provide education and understanding in the form of themed webinars, YouTube videos etc., in the short term for the PDF versions of the existing codes. In the future, this could also be applicable to the digitalised versions of the existing codes and for a consolidated code.

The solutions proposed by stakeholders and the Steering Group are presented below as proposed solutions. The issue/s that they address are also identified.

**Proposed Solution 1**   Introduce user journeys (See Table 1, ID 3) that simplify a user's interaction with the codes. One of the advantages of presenting the codes in the form of user journeys is that implicit guidance on how to, for example, use and modify the codes is provided (See Table 1, ID 1). Additionally, the use of user journeys will enable the filtering, where a code is digitalised, and retrieval of only those clauses that the user seeks (See Table 1, ID 2) and the sectionalisation and version control of the code (See Table 4, ID 2). This would address the following issues: Issue 1, Issue 3, Issue 4 and Issue 5.

**Proposed Solution 2**    Provide guidance documentation separate from the code (See Table 1, ID 1). This would address the following issue: Issue 3 and Issue 5.

**Proposed Solution 3**    Provide code filtering, where a code is digital, to retrieve only the applicable clauses (See Table 1, ID 2). This would address the following issues: Issue 4 and Issue 5.

**Proposed Solution 4**    Allow the user to see the clauses that are currently being considered for change under ongoing code modifications (See Table 1, ID 5) and provision of links to the code modification website (See Table 1, ID 5) and the ability to search for clauses under change. This would address the following issues: Issue 6.

**Proposed Solution 5**    Provide cross -code signposting i.e., where codes cross-reference other codes (See Table 1, ID 4). This would address the following issues: Issue 4 and Issue 5.

**Proposed Solution 6**    Simplification: translating code requirements (where possible) from technical prescriptions and legalese into plain English and establishing outcome-based regulation into new rule design. Using plain English (See Table 1, ID 7). This would address the following issues: Issue 2 and Issue 3.

**Proposed Solution 7**    Removal of duplication (See Table 1, ID 8) from the Grid Code and the Distribution Code. This would mean that there is only one set of the truth held in a single document. This would address the following issues: Issue 5.

**Proposed Solution 8**    Rationalisation: streamlining undue detailed prescription and removing any irrelevant or outdated information. More concise / compact codes (See Table 1, ID 9). This would address the following issues: Issue 1 and Issue 3.

**Proposed Solution 9**    Providing education and understanding through themed webinars, YouTube videos etc, in the short term for the PDF versions of the existing codes. In the future this could also be applicable to the digitalised versions of the existing codes and for a consolidated code. This would address the following issues: Issue 3, Issue 4 and Issue 5.

**Ask of Steering Group:** Vote on the solution/s you want included in the scoping document.

# 4. Potential Solutions Section

## 4.1. Whole System Consolidation or Alignment

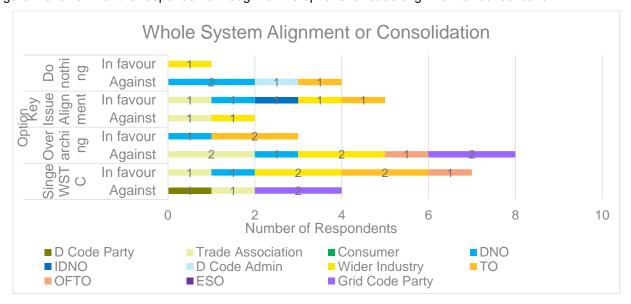Figure 2 shows what the respondents thought of the options for code alignment or consolidation.



*Figure 2: Whole System Consolidation or Alignment*

**Analysis**: Figure 2 shows that there was interest in both alignment and code consolidation. It appears that respondents feel action is warranted as the 'Do nothing' option was least favoured. Respondents indicated that they disliked the option of an 'Overarching code while retaining the existing codes'. The reason most respondents gave for disliking this option was that there would then be three codes instead of two, thus creating additional work for code users.

The option for a 'single WSTC' i.e., a consolidated code is the option which gathered the most favourable responses, of seven for, and four against. Most of the negative responses for that option were due to the resource required to produce a 'single WSTC' and timing issues, rather than any objection to the principle of the solution.

However, it's less clear whether this or the option for 'key issue alignment' should proceed. Both have 3 votes more in favour than against.

From this analysis, below are two proposed solutions for the Steering Group to consider.

**Proposed Solution 10** Write a 'Single WSTC' scoping document as part of a Consolidation project For details of delivery and timing regarding the ECR outcome see section 4.4.1 (Q12) in Proposed Delivery Solution 2 This would address the following issues: Issue 5, Issue 4 and Issue 7.

**Proposed Solution 11** Identify areas of non-alignment and where alignment issues are identified, these will be pursued through the existing code governance process (alignment).   This would address the following issues: Issue 2, Issue 3 and Issue 5.

**Ask of Steering Group:** Vote on the solution(s) you want included in the scoping document.

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

Stakeholders have raised the following disadvantages for the consolidation and/or alignment activity as shown in Table 2.

*Table 2: Consolidation/Alignment: Other disadvantages*

| ID | Description of disadvantage identified by respondents | Analysis/Mitigation |
|---|---|---|
| 1. | There is the potential for contradictions and confusion where multiple codes refer to the same situation | This is the case at present with the two codes. There is limited stakeholder appetite for production of a third code and therefore it appears unlikely that the number of codes will increase. |
| 2. | Combining codes together may leave stakeholders with more legal text to analyse to understand which provisions apply to them | Any code improvement process should actively aim to avoid further complicating the user experience. Furthermore, this can also be mitigated by the decision to digitalise using User Journeys. |
| 3. | Merged codes will result in very large documents making it more difficult to find the bits that are relevant consequently having the converse effect than that desired | This could depend on the consolidation proposals selected. It would be mitigated if the consolidation results in less duplication and is accompanied by improved signposting. This could be mitigated by a decision to pursue digitalisation and User Journeys.  These will assist with navigating the large, consolidated document. |
| 4. | Including SQSS in the scope of the project could lead to confusion behind the principles of SQSS compared to Grid Code | Refer to analysis of Q10 in Section 4.3.1. |

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| ID | Description of disadvantage identified by respondents | Analysis/Mitigation |
|---|---|---|
| 5. | The technical criteria/legislation could be unintentionally omitted when trying to combine and simplify the codes | This risk is much reduced by having industry experts forming the workgroups to undertake the work and a detailed review process. This raises the additional risk of whether sufficient expertise is available to undertake this task.<br><br>Additionally, mitigation is also gained by having clause labels/tag/filter become part of the code. They would be viewable by the code users and could be altered via the modification process if determined to be incorrect. |
| 6. | Due to high resource requirements, the project cannot be easily delivered in the near term | The project team would plan the work and identify the scope of the task and the resource requirement at the beginning, clearly articulate what, and how much work is needed at which stage, propose the most efficient way to carry out the project, and enable participants to assign resources at the correct time. This is based on an assumption that industry will provide subject matter experts to get involved in the project. |
| 7. | Some participants may see code merging as a reduction in obligations when it is not | The project must continue to make it clear that no changes to any obligations within codes would be implemented outside current governance processes as a result of this project. |
| 8. | Simplifying codes could mean a loss of legal clarity | The project will ensure that the robustness of the codes is maintained. |
| 9. | Creating a single WSTC could unintentionally create a barrier to entry for flexible resources if technical requirements are aligned across current codes without properly considering the impact on smaller assets | The project must continue to make it clear that no changes to any obligations within codes would be implemented outside current governance processes as a result of this project. |
| 10. | Having a single WSTC could result in the loss of the ability to allow flexibility to apply small differences that are appropriate for sector or scale of operation | If the existing codes do not provide this flexibility, code governance processes allow code users to propose code improvements. Network operators already exercise variability in applying the codes, via individual connection agreements.<br><br>The new code could be digitalised with all clauses labelled/tagged/filterable to indicate the users it applies to. As a result, a user would only have to review the clauses relevant to them. Thus, the end product should enable new / small participants to easily navigate the codes. |

**Analysis**: Stakeholders have identified a number of risks associated with consolidation via these disadvantages. The analysis and possible mitigating actions have been placed next to each disadvantage.

**Recommendation 1**  These disadvantages should be re-worded as risks and added to the projects risks and issues register.

**Ask of Steering Group:** Vote on whether to go ahead with Recommendation 1.

### 4.1.2. 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?

Stakeholders identified their issues together with their solutions.  These are summarised in .

*Table 3: Issues and their respective potential solution*

| ID | Issue | Potential Solution | Proposed Solution |
|----|-------|--------------------|--------------------|
| 1 | Difficult to navigate (Issue 5) | Addressed by having a digitalised platform so users can more easily identify their obligations without the need to read through the entire code | Proposed Solution 1 & Proposed Solution 3 |
| 2 | Difficulty understanding (Issue 2) | A more simplified and rationalised WSTC would ease issues of understanding. This is true especially as DNOs start to transition to DSOs. | Proposed Solution 6 & Proposed Solution 7 |
| 3 | Understanding cross-code requirements (Issue 4 & Issue 5) | Aligning key issues, combined with cross-code signposting or a single WSTC | Proposed Solution 2, Proposed Solution 7 & Proposed Solution 8 |
| 4 | Market accessibility (All Issues) | A single WSTC written in plain English | Proposed Solution 6 & Proposed Solution 7 |

**Analysis**: This implies that, in the view of stakeholders, both workstreams of the project (Consolidation/alignment and Digitalisation) may provide solutions to address all the challenges identified by respondents.

**Ask of Steering Group:** None as proposed solutions to be voted on are in sections 3.2, 4.1 & 4.2.2.

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

Table 4 shows the suggested additional solutions made by stakeholders

*Table 4: Additional Potential Solutions*

| ID | Additional Solution | # of respondents | Potential Solution |
|----|---------------------|------------------|--------------------|
| 1 | No other suggestions | 4 | N/A |
| 2 | Sectionalised and version control the code | 2 | 12 |
| 3 | Include guidance document | 1 | 2 |
| 4 | Allow searches of code modifications | 1 | 4 |
| 5 | Stage the delivery over time | 1 | N/A |
| 6 | Merge other industry codes | 1 | 13 |

| ID | Additional Solution | # of respondents | Potential Solution |
|----|---------------------|------------------|--------------------|
| 7 | Have Grid Code and Distribution Code report to a single panel | 1 | 14 |
| 8 | Improve the performance of code administration (management) | 1 | 15 |
| 9 | Include the CUSC in the project | 1 | 13 |
| 10 | Include the STC in the project | 1 | 13 |
| 11 | Incorporate the SQSS into the Grid Code | 1 | 16 |

**Analysis:** The respondents have suggested a variety of additional solutions to address the issues identified. These are presented below for the Steering Group to indicate the ones to be progressed further

**Proposed Solution 12**  To split up the Grid Code and Distribution Code into smaller sections/clauses and version control each piece separately (Table 4, ID 2). This would address the following issues: Issue 1 and Issue 5.

**Proposed Solution 13**  Include other industry codes into the Consolidation process. If the Steering group approves this solution then the requirement is to recommend to BEIS/Ofgem's ECR, via the code panels, to consider merging other industry codes alongside the Grid Code and the Distribution Code (Table 4, ID 6, 9 & 10).

**Proposed Solution 14**  Have the Grid Code and the Distribution Code report to a single governance panel (Table 4, ID 7). This would address the following issues: Issue 6.

**Proposed Solution 15**  Improve the performance of Code Administrators (Table 4, ID 8). This would address the following issues: Issue 6.

**Proposed Solution 16**  Incorporate the SQSS into the Grid Code.

**Ask of Steering Group:** Vote on the solution(s) you want included in the scoping document.

## 4.2.  Digitalisation

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

Table 5 shows the other digitalisation solutions proposed by stakeholders.

*Table 5: Other solutions for digitalisation*

| ID | Other Solutions Suggested | # of Respondents | Proposed Solution |
|----|---------------------------|------------------|-------------------|
| 1 | None | 7 | N/A |
| 2 | Phased introduction of digitalisation | 1 | N/A |
| 3 | Allow system to point to supporting info within codes and/or supporting standards | 1 | 17 |
| 4 | Allow for digital community discussions for collaborative response to issues | 1 | 18 |
| 5 | Allow for digital community to record additional meta data about the codes like Wikipedia | 1 | 19 |
| 6 | Allow version control to track previous versions of code | 1 | 20 |

| 7 | Develop automated solutions that require minimal resource to add or change | 1 | N/A |
|---|---|---|---|

**Analysis**:

Phased Delivery: The phased introduction of digitalisation could provide the opportunity to deliver some early benefits to industry. How benefits can be suitably phased will need to be investigated.

Signposting: See responses to Q7 on self-service and signposting in Section 4.2.2.

Digital Community Discussion: Allowing for digital discussion of issues via the use of a discussion board may be of interest to a number of parties and may deliver some benefits such as the ability to share knowledge. It will also mean additional effort on the part of the Code Administrator/manager to moderate the discussions. The role of Code Administrator/manager would need to be very clear.

Metadata: Allowing the digital community to record metadata about the codes in the form of a wiki could bring benefits to code users. For example, the ability to share knowledge. It would require additional effort for it to be administered and moderated by the code administrator/manager.

View Previous Versions of the Code: Allowing visibility of previous versions of the digitalised code. If it seems useful in a cost-benefit analysis, it could be suggested for inclusion in a later delivery for digitalisation.

The additional potential solutions identified by stakeholders are below for the Steering Group's consideration:

**Proposed Solution 17**  Allow digitalised system to point to supporting information within codes and/or supporting standards and/or other codes. This would address the following issues: Issue 1, Issue 2, Issue 3, Issue 4, Issue 5, Issue 6 and Issue 7.

**Proposed Solution 18**  Allow for digital community discussions for collaborative response to issues. This would address the following issues: Issue 1, Issue 2, Issue 3, Issue 4 and Issue 5.

**Proposed Solution 19**  Allow for a digital community to record additional meta data about the codes like Wikipedia. This would address the following issues: Issue 1, Issue 2, Issue 3, Issue 4 and Issue 5.

**Proposed Solution 20**  Allow version control to track previous versions of code. This would address the following issues: Issue 1, Issue 2, Issue 3, Issue 4 and Issue 5.

**Ask of Steering Group:** Vote on the solution/s you want included in the scoping document.

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

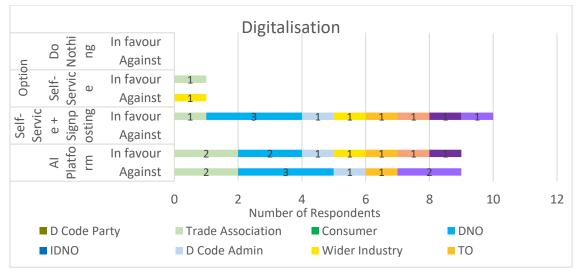Figure 3 shows the stakeholders views on the options presented for digitalising the codes.



Figure 3:  Stakeholder opinions on the solution options for digitalisation

**Analysis**: Stakeholder responses suggest a preference for the self-service & signposting option presented in the consultation. Stakeholders gave as much negative feedback as positive feedback on the option for an Artificial Intelligence (AI) platform. Most of the negative comments on the AI platform were due to the legally binding/for guidance issue (see digitalised WSTC Consultation 1, Section 3.2 for more information). However, if this issue is resolved, some of these negative responses could be resolved or mitigated. For this reason, the option for an AI platform is among the proposed solutions for the Steering Group's consideration.

**Proposed Solution 21**     Self-service with signposting. This would address the following issues: Issue 4 and Issue 5.

**Proposed Solution 22**     Artificial intelligence driven platform. This would address the following issues: Issue 4 and Issue 5.

**Ask of Steering Group:** Vote on the solution/s you want included in the scoping document

4.2.3.    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.

Table 6 shows the risks identified by stakeholders.

*Table 6: Risks and mitigations identified by stakeholders*

| Risk ID | Risk Description | Risk Mitigation |
|---|---|---|
| R1 | There is a risk that digitalizing codes is a significant investment so should be undertaken on the near final WSTC rather than separately digitizing the existing codes – unless doing so can be shown to offer better value. | Ensure that the digital platform is of a modular design, which enables future proofing and seamless integration of whatever the ECR outcome is.

Make a detailed and efficient plan for digitalisation, and resource it properly.

Ensure that any IT systems instigated as a solution is kept up-to-date throughout its lifetime. |
| R2 | There is a risk that with digitalisation in parallel with consolidation and the ECR is that the alignment and potential consolidation may take longer than the digitalisation process, which may result in some elements of the digitalisation having to be revisited to incorporate the final version. Depending on the magnitude of the retrospective updates, this may not be the most cost-efficient process. In the worst-case scenario, the outcome of the ECR programme could negate most if not all the work of the code consolidation and digitalisation workstreams. | |
| R3 | There is a risk that work completed as part of the digitalisation may be deemed 'wasted' should the ECR outcome require consolidating an already digitalised code with another one. | |
| R4 | There is a risk that code consolidation activities may take many years and the immediate benefits that could be delivered through an incremental digitalisation process won't be captured for a longer period. | This could be mitigated by considering a staged consolidation process and exploring approaches to developing generic digital capabilities such as account preferences, search, navigation, and notification that can be adapted and applied to any code content with minimal rework.

In addition, the consolidation and digitalisation workstreams have been separated so that their benefits can be delivered independently. |

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| Risk ID | Risk Description | Risk Mitigation |
|---------|------------------|-----------------|
| R5 | There is a risk that the outcome of the ECR may result in major changes to the codes within scope and require other codes to be included within the scope, resulting in inefficiencies. | As this risk has been raised on more than one occasion, the consolidation workstream could be delayed till the outcome of the ECR is known.<br><br>Improvement activities which are less likely to fall within the ECR remit could be identified for immediate progression. |
| R6 | There is a risk that due to the great deal of change currently ongoing in the industry presently meaning that suitable resource may not be able to participate in the project. | Steering Group will ensure that only workstreams considered valuable are passed to industry for development and that delivery timescales are appropriate given the strain on technical industry resources.<br><br>Furthermore, the project will endeavour to make the most efficient use of required stakeholder resource and give good resource estimates for participation in project workgroups so that stakeholders can assign resources suitably. This is based on an assumption that industry will provide subject matter experts to get involved in the project. |
| R7 | There is a risk that the ECR determines that code administration activities should change hands, resulting in stranded digitalised codes. | The mitigation for this is to ensure that any digitalised platform should be transferrable. |

Table 7 shows the opportunities identified by stakeholders.

*Table 7: Opportunities identified by stakeholders*

| Opportunity ID | Opportunity Description |
|----------------|------------------------|
| O1 | There is an opportunity to develop some early thinking on code consolidation to help the debate. |
| O2 | There is an opportunity to accelerate the transition to net zero by easing the navigation of codes |
| O3 | There is an opportunity to highlight the areas where the user's obligations include requirements that are being taken through the modification process. |

**Recommendation 2** Transfer these risks and opportunities into a project risk register.

**Ask of Steering Group:** Vote on whether to go ahead with Recommendation 2.

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

Figure 4 shows stakeholders' preferences on the issue of 'legally binding' versus 'for guidance' of the digitalised codes

Figure 4: Legal standing of the digitalised codes

**Analysis**: The feedback from stakeholders implies that there is no overall consensus on this issue. It can be noted that in the comments that the respondents made, the majority of stakeholders who voted 'guidance only' did so due to concerns about AI. This concern may be mitigated since we are not recommending the AI platform option. If this concern is removed, it leaves the 'legally binding' option with a clear majority over the 'guidance only' option.

**Recommendation 3**  Defer decision on this issue until the scoping document for digitalisation is ready.

**Ask of Steering Group:** Vote on whether to go ahead with Recommendation 3.

## 4.3.  Work Independent of the Energy Code Reform (ECR) Outcome

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

Figure 5 shows stakeholders' preferences regarding work packages that can be progressed independent of the ECR. The options for progression were discussed in Consultation 1 Section 3.4.
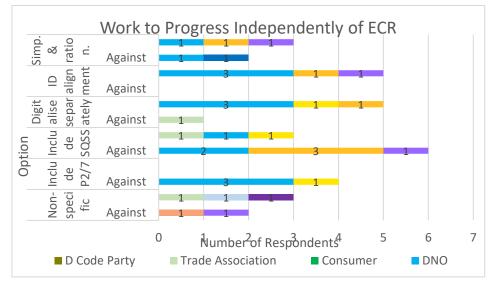


Figure 5: Work to be progressed independently of the ECR

**Analysis**: The stakeholders have indicated that they are in favour of the option to 'identify areas for alignment' and to 'digitalise separately'. The latter refers to progressing the Digitalisation of the Grid Code and the Distribution Code separately.

There is not a clear view of the stakeholders' preference on the option for 'simplification and rationalisation'.

Stakeholders have advised that P2/7 is already part of the Distribution Code and shares the same governance process.

Although stakeholders have indicated that they are against the option to 'include the SQSS in the Grid Code', an interesting suggestion came out of their responses to incorporate the SQSS into the Grid Code governance, so that both are governed in an identical way.  This approach would mirror the existing arrangements between P2/7 and the Distribution Code.

Thus, two proposed solutions are being put forward for the Steering Group's consideration under this section.

**Proposed Solution 23**   Digitalise both codes, but on separate platforms. This would address the following issues: Issue 4 and Issue 5.

**Proposed Solution 24**   Include the SQSS under the current Grid Code governance process.

**Ask of Steering Group:** Vote on the solution(s) you want included in the scoping document


### 4.3.2.   Q11: Are there other opportunities that could be considered?

Stakeholders have suggested the opportunities detailed in Table 8 could be considered.

*Table 8: Additional opportunities suggested by respondents*

| ID | Opportunity Description | Proposed Solution |
|----|------------------------|-------------------|
| 1  | Produce and maintain guidance material (2 respondents) | 2 |
| 2  | Do a full root and branch review of all codes | 11 |
| 3  | Include the STC within scope of the project | 10 |
| 4  | Include the Relevant Engineering Standards (RES) within scope of the project | 25 |

**Analysis**: The suggestion to produce guidance material has been provided before in the responses to Q2 & Q5 so is a priority for stakeholders. See Proposed Solution 2.

The suggestion to undertake a full root and branch review of all codes is interpreted as having an outcome of fully aligned technical codes as in Proposed Solution 11.

The suggestion to include STC is included in Proposed Solution 13.

Including the Relevant Engineering Standards (RES) is being put forward for the Steering Group's consideration.

**Proposed Solution 25**   Include the Relevant Engineering Standards (RES) within scope of the project.

**Ask of Steering Group:** Vote on the solution/s you want included in the scoping document.


## 4.4.  Delivery of Solutions

### 4.4.1.   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 delivering the best value considering the issues implementing the solutions? Please provide a rationale for your response.

Figure 6 shows stakeholders' preferences regarding the delivery of the two solution categories in the consultation document i.e. Consolidation and Digitisation. The options for progression were discussed in Section 3.5 of Consultation 1.
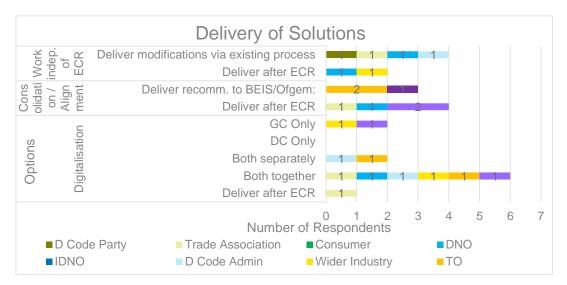


*Figure 6: Delivery independent of ECR*

**Analysis**: This question shows us the preferences of the stakeholders for each of the suggested workstreams.

In the workstream for 'work independent of the ECR' there is evidence that stakeholders would like the 'whole system alignment' work to go ahead in advance of the ECR. See Proposed Delivery Solution 1.

For the 'Consolidation' workstream the number of respondents who wish to deliver before and after is close to even, so it is unclear which option to pursue here. See Proposed Delivery Solution 2.

However, there is a good indication that for the 'Digitalisation' workstream, stakeholders want the Grid Code (GC) and the Distribution Code (DC) to be digitalised together on one common platform. See Proposed Delivery Solution 3.

| | |
|---|---|
| **Proposed Delivery Solution 1** | Proceed with alignment independently of ECR. |
| **Proposed Delivery Solution 2** | Develop a scope of work for the Consolidation workstream. Delivery of the work will be deferred until ECR outcome is known. |
| **Proposed Delivery Solution 3** | Digitalise both codes together on one common platform, independently of ECR. |

**Ask of Steering Group:** Vote on the delivery solution/s you want included in the scoping document.

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

*Table 9: Risks identified by stakeholders*

| Risk ID | Risk Description | Risk Mitigation |
|---|---|---|
| R8 | There is a risk that the ECR outcome will force changes in the project scope | Code Consolidation which is directly affected by the ECR outcome is to be investigated further to define its scope and benefits and its delivery |

| | | |
|---|---|---|
| | | is proposed to be deferred until the ECR outcome is known. |
| | | Digitalisation which is considered a no-regret may proceed. |
| | | Another means of mitigation is to defer all work on consolidation |
| R9 | There is a risk that there are insufficient suitable resources to deliver the project | Steering Group will ensure that only workstreams considered valuable by stakeholders are passed to industry for development. |
| | | Furthermore, the project will endeavour to give good resource estimates for participation in project workgroups so that stakeholders can assign resources suitably.  This assumes that industry will be able to provide the required resources.  A separate risk on availability of resources has been raised. |
| R10 | There is a risk that the digital platform does not tie up with the formal legal text. | The Code Administrators (Managers when in place) will guarantee accuracy as they currently do with the PDF versions of the codes. |
| | | There are also options to achieve this technologically.  This issue requires further investigation once the digitalisation scope is defined. |
| R11 | There is a risk that modifications inflight may change the outcome of the digitalisation platform e.g. for Grid Code Modification GC0117, regional differences between Large, Medium and Small Power Stations. | Digitalisation approach will take into consideration how the inflight modifications would be affected by the work. |
| R12 | There is a risk of scope creep that leads to overrun and overspend. | Mitigation is to have a clearly defined scope and monitor it closely. Additional items should be added as a Phase 2. |
| R13 | There is a risk of losing industry knowledge in the process of consolidating the codes. | Mitigation is to include good and experienced representation from across industry. |
| R14 | There is a risk that there will not be consensus on the WSTC. | The Steering Group has defined how it will manage non-consensus in the Terms of Reference. |
| R15 | There is a risk that minor changes to the codes could have unintended financial and regulatory consequences for users if the changes are not subject to an appropriate amount of peer review and scrutiny. | Appropriate peer review and scrutiny will be applied as is done under the current governance process.  This assumes that industry will be able to provide the required resources.  A separate risk on availability of resources has been raised. |
| R16 | There is a risk to project timescales arising from the high level of complexity associated with seeking to merge two large and highly complex legal documents. | Once the scope is understood, a clear project plan will be drawn up with realistic delivery timelines. |
| R17 | There is a risk of existing code obligations being changed, either unwittingly or unnoticed, by users. | Appropriate peer review and scrutiny will be applied as is done under the current governance process.  This assumes that |

industry will be able to provide the required resources.  A separate risk on availability of resources has been raised.

**Recommendation 4**  Transfer these risks into a project risk register.

**Ask of Steering Group:** Vote on whether to go ahead with Recommendation 4.

# 5.  Key Benefits

## 5.1.    Q14: Do you agree with the key benefits outlined above?

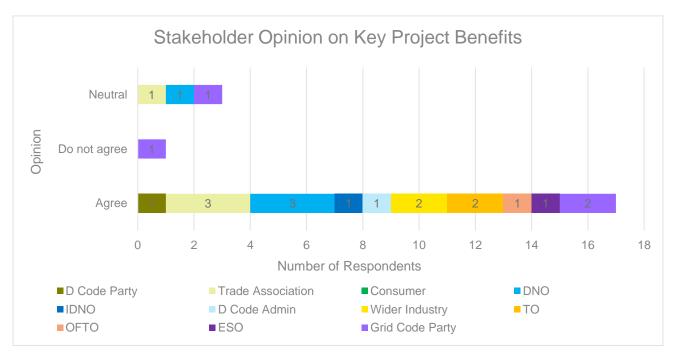Figure 7 shows the respondents opinion of the benefits.



*Figure 7: Respondents Position Regarding Benefits*

**Analysis:** There is broad agreement that the project can achieve the suggested benefits. However, respondents indicated that industry is facing a lot of pressing matters that may be of higher priority and so may utilise their existing skilled resources. A section of industry also believes that the benefits could be delivered through less costly mechanisms, instead of this project.  It is worth noting that the prospective benefits in the consultation were not quantified and are therefore an indication of the potential benefit areas.

## 5.2.    …and can you see other benefits resulting from this project?

Stakeholders have identified the additional benefits as shown in Table 10.

*Table 10: Other benefits mentioned by stakeholders:*

| ID | Benefit Description |
| --- | --- |
| 1. | Improved code quality can be achieved by helping to easily identify inter and intra code dependencies and potential (otherwise hard to spot) defects |

2. Any solutions progressed that address the disparity of commercial advantage gained by being able to navigate and understand the technical codes in their current form would improve competition in generation/supply

3. Reducing the amount of resource spent monitoring and tracking change

**Analysis:** The majority of respondents remained neutral about the project's ability to deliver more benefits than those already proposed. However, a few stakeholders identified additional benefits. These newly identified benefits will be taken into account when working on the cost-benefit analysis.

**Recommendation 5**  Ensure the additional benefits identified by stakeholders are captured as part of the cost-benefit analysis together with the benefits previously identified.

**Ask of Steering Group:** Vote on whether to go ahead with Recommendation 5.

## 6. Project Governance

### 6.1. Decision Making

#### 6.1.1.   Q15: Do you think that the proposed governance structure will enable delivery of the project?

Figure 8 shows that the majority of respondents thought that the governance structure would enable the delivery of the project.
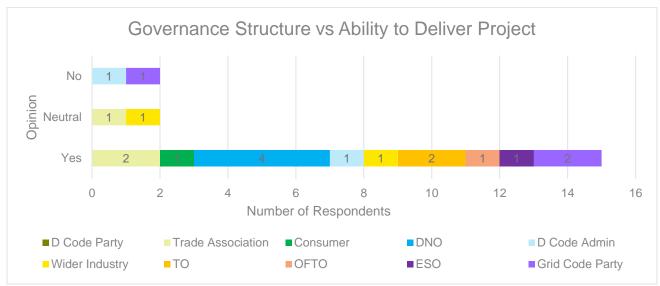


*Figure 8: Views on Proposed Governance Structure Enabling Delivery*

#### 6.1.2.   Would you change any aspect? If so, why?

Figure 9 shows that the majority of respondents did not think that any aspects of the governance should be changed.
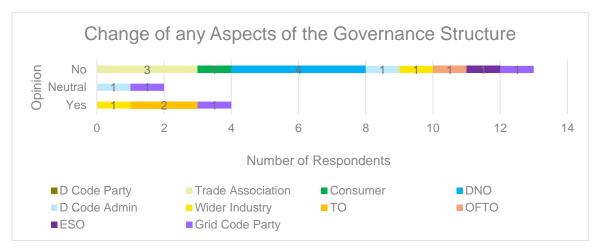
*Figure 9: Views on Whether Proposed Governance Structure Requires Changes*

*Table 11: Examples of Reasons for Agreeing with the Proposed Governance structure*

| ID | Respondents Reasons for Agreement |
|---|---|
| 1. | Due to the close relationship between the Grid Code and Distribution Code, a Joint Grid Code/Distribution Code Working group is established. |
| 2. | We would also like Ofgem and/or BEIS to be as active as possible in every role, to avoid delays between recommendations and decisions. |
| 3. | The proposed governance structure should allow delivery of the project – though we note that the 'exact' scope of project is yet to be defined. |

*Table 12: Suggested alternatives of aspects of Governance structure*

| ID | Respondents Reasons for Disagreement |
|---|---|
| 1. | Respondent indicated that they do not envisage a standard code workgroup being able to manage the merging or consolidation of codes in an effective or timely manner. Instead, external lawyers will be required to do most of the work. |
| 2. | The project ought to communicate with BEIS/Ofgem via the panels rather than directly. |

**Analysis:** The majority of respondents agree that the project governance arrangements are suitable to deliver the project and would not change anything. However, a respondent has suggested that the governance arrangements could be improved by ensuring the project communicates with Ofgem/BEIS via the GCRP and DCRP. Consequently, we have updated the governance arrangements as shown in Figure 10.
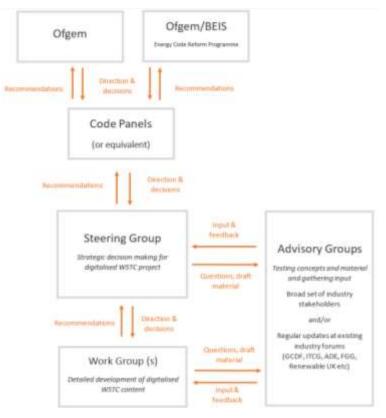
*Figure 10: Project Governance Arrangements*

**Recommendation 6**  Steering group to adopt the updated governance arrangements.

**Ask of Steering Group:** Vote on whether to go ahead with Recommendation 6.

6.1.3.  Q16: Which elements of the project would you, or your organisation, like to be involved in? If so, please state in what capacity, and provide a short description of the perspective and value that you would bring to the project.
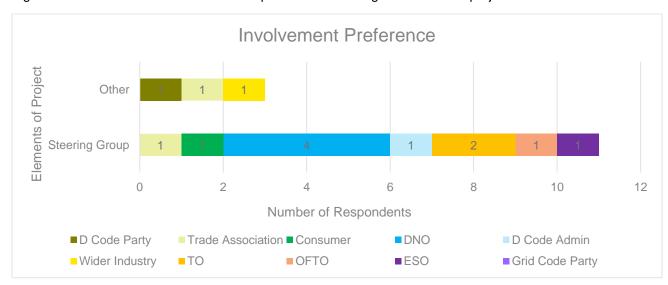
Figure 11 shows what involvement the respondents are willing to make in the project.



*Figure 11: Involvement from Organisations*

**Analysis:** The main theme emerging from the responses to Q16 is that stakeholders are willing to get involved in the Steering Group work by providing resources and industry technical expertise on the code Alignment, Consolidation and Digitalisation workstreams.

One stakeholder has suggested that they are happy to participate by sharing their expertise on digitalisation.

**Ask of Steering Group:** None

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



*Figure 12: Principles to Apply when forming Project Group Membership*

**Analysis:** The majority of respondents from across the industry sectors indicate a desire for the Steering Group to be representative of the breadth of industry, and for its ways of working to reflect current industry practice. Some respondents have also mentioned the necessity for members to have expertise in code use, administration, and governance.

Reflected in stakeholders' responses has been the request for independence and impartiality of the Chairperson.

**Ask of Steering Group:** None

## 6.2.  Proposed Terms of Reference – Steering Group

### 6.2.1    Q18: What are your views on the proposed Terms of Reference for the Steering Group?

Table 13  shows the themes that emerged from the views of respondents on the proposed Terms of Reference, alongside the responses.

*Table 13: Stakeholders' Views on the Steering Group's Proposed Terms of Reference*

| ID | View | Response |
|---|---|---|
| 1. | There should be a clear institutional owner or sponsor for the work; someone to whom the Steering Group Chairperson reports to, and with the authority to direct strategically and assign resources if necessary. | Steering Group will be reporting to the DCRP & GCRP as shown in Figure 10. |

| 2. | The terms of reference should include an escalation route to deal with slow progress. | Noted. Steering Group to agree an escalation route to deal with slow progress |
|---|---|---|
| 3. | Decision making should ideally be through whole group consensus. | Included |
| 4. | Ownership and ultimate responsibility of project should be clear i.e., Ofgem / BEIS, the Steering Group or the ESO. | Since the two codes are owned by industry, the ownership of the project sits with industry as represented within the Steering Group comprising a breadth of industry players including the ESO.<br><br>Ofgem and BEIS remain the ultimate decision maker for recommendations arising from this project. |
| 5. | Steering Group should direct an outcome that is in the best interests of consumers (value for money, effective and enabling competition). | Noted |

**Analysis:** There were mixed views regarding this proposal. Most respondents generally agreed with the proposed Terms of Reference. However, some respondents indicated a need for clarity on the route of escalation of work, ownership, and ultimate responsibility of its deliverables.

Most importantly, stakeholders are keen to have the Terms of Reference having an ability to sufficiently guide the Steering Group to direct an outcome that is value for money and that enables competition. The Terms of Reference (including the above-mentioned escalation route and the decision-making arrangements) should be agreed and approved by the Steering Group.

**Ask of Steering Group:** None.

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

Table 14 shows some of the major themes that emerged from the consultation responses, alongside the response from the project.

*Table 14: Views on how to include all perspectives*

| ID | View | Response |
|---|---|---|
| 1. | Representatives of the other code bodies, where links with Grid Code and Distribution Code are numerous and critical to the smooth system operation, should be included in the Steering Group. | Elexon are included in steering group representing wider industry participants. |
| 2. | Include all relevant stakeholders or potentially interested parties in the Steering Group | See Terms of Reference for the steering group membership composition. |
| 3. | Trade association membership of the Steering Group should not be limited to only 1 or 2.  If more trade associations are interested in joining, this is an effective way of accessing the views of more stakeholders. | Trade associations have been allocated two seats with 2 alternates. |

**Analysis:** The responses to this question were generally to ensure the provision of suitable representation on the Steering Group. This has been actioned in the steering group membership which can be seen in its Terms of Reference.

**Ask of Steering Group:** None.

### 6.2.3    Q20: How do you think the Steering Group should make decisions, particularly if there is not consensus?

Below are some of the major themes that emerged from the consultation responses:

*Table 15: Views on decision-making*

| ID | View | Response |
|----|------|----------|
| 1. | There needs to be a formal sponsor to receive the output of the project and who can decide what to implement | The steering group will report to the GCRP and the DCRP as described in Figure 10.  The GCRP and the DCRP will make recommendations to Ofgem on behalf of industry. |
| 2. | Voting with Independent Chair having the casting vote | Included in the Terms of Reference |
| 3. | Categorise issues into (matters of significant importance, majority matters of importance, and all other matters. Percentage votes should reflect (100%, 75% and 51% respectively) | Contrary to item 2 above, so not included in the Terms of Reference |
| 4. | The Steering Group should provide recommendations only if that's what it is set up to do. | The Steering Group has several functions that have been articulated in the Terms of Reference. |
| 5. | Consensus | Consensus will be the aim of the Steering Group. However, it may not always be possible. The Terms of Reference define how to manage non-consensus. |

**Analysis:** There were some mixed views around the question of consensus which have been included in the Steering Group Terms of Reference and project governance structure as necessary.

**Ask of Steering Group:** None.

## 6.3.  Stakeholder Engagement

### 6.3.1    Q21: What are your views on the proposed stakeholder engagement? Is there more that can be done to ensure effective stakeholder engagement?
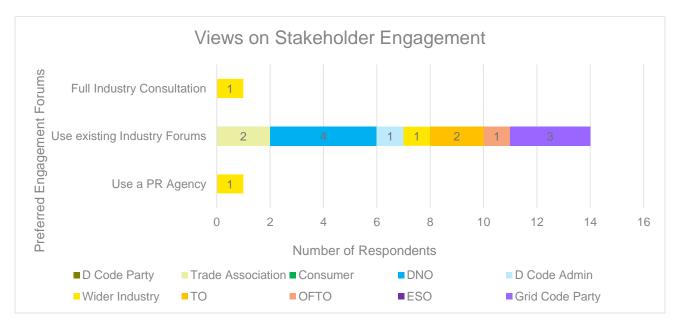
*Figure 13: Views and suggestions on stakeholder engagement*

**Analysis:** The majority of stakeholders have suggested the use of existing industry forums to ensure that the breadth of industry is involved in the project. At this point we are not considering the use of a PR agency.

**Ask of Steering Group:** None.

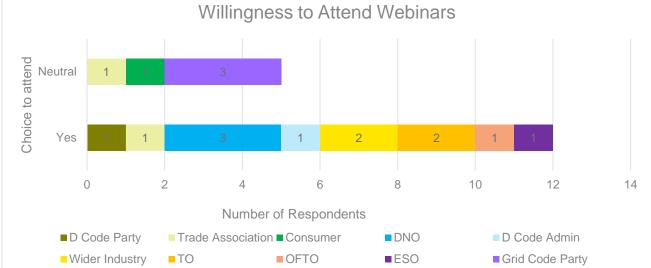### 6.3.2 Q22: Would you like to attend webinars?



*Figure 14: Willingness to Attend Webinars*

**Analysis:** A majority of stakeholders indicated their willingness to attend webinars as a means of interacting with the project.

**Ask of Steering Group:** None.

### 6.3.3    Q23: Would you like to request a regular update from the project at your forum?
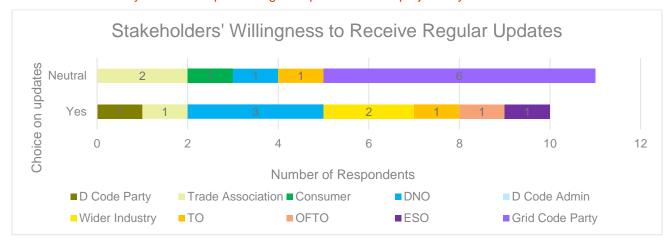


*Figure 15: Choice of regular updates*

**Analysis:**  A majority of stakeholders would like to receive regular updates from the project at their forums.

**Ask of Steering Group:** None.

## 6.4.  Schedule

### 6.4.1    Q24: Views on proposed schedule

Table 16 shows the major themes highlighted by respondents:

*Table 16: Views on the schedule*

| ID | View | Response |
|----|------|----------|
| 1. | The first Steering Group date is too soon. Having the first Steering Group meeting in Q1 2022 is more realistic. | The target for the first Steering Group has now been met |
| 2. | ESO should be aware of the fact that industry resources (of all parties, including Ofgem) are currently stretched with the amount of change going on within industry. Therefore, project timelines should be flexible | A collaborative working approach will be taken forward to expedite delivery of the project. |

**Analysis:** Stakeholders had concerns with the timing of the inaugural Steering Group meeting and resourcing from industry for the Steering Group. The latter is due to stakeholder resources being stretched by the current level of change within the electricity industry.

**Ask of Steering Group:** None.

# 7.  Next Steps

This analysis has resulted in several proposed solutions and potential delivery solutions for consideration by the Steering Group.  There are also some recommendations for consideration.  To that end, Steering Group members will be provided with an opportunity to vote indicating which items should be progressed and also

provide a voting statement. The Steering Group's votes should ensure that any solutions progressed map onto one or more of the challenges that were identified by stakeholders.

Summaries of the proposed solutions, recommendations and delivery solutions can be seen in Section 8. Once the votes have been received and counted, the selected items will be taken forward into the scoping documents.

## 8. Compilation of Proposed Solutions, Recommendations and Proposed Delivery Solutions

*Table 17: Compilation of Proposed Solutions*

| ID | Section | Question | Proposed Solution | Issues Addressed |
|----|---------|----------|-------------------|------------------|
| 1. | 3.2 | Q2 | Introduce user journeys (See Table 1, ID 3) that simplify a user's interaction with the codes. One of the advantages of presenting the codes in the form of user journeys is that implicit guidance on how to, for example, use and modify the codes is provided (See Table 1, ID 1). Additionally, the use of user journeys will enable the filtering, where a code is digitalised, and retrieval of only those clauses that the user seeks (See Table 1, ID 2) and the sectionalisation and version control of the code (See Table 4, ID 2). | Issue 1, Issue 3, Issue 4 & Issue 5. |
| 2. | 3.2 | Q2 | Provide guidance documentation separate from the code (See Table 1, ID 1). | Issue 3 & Issue 5 |
| 3. | 3.2 | Q2 | Provide code filtering, where a code is digital, to retrieve only the applicable clauses (See Table 1, ID 2). | Issue 4 & Issue 5 |
| 4. | 3.2 | Q2 | Allow the user to see the clauses that are currently being considered for change under ongoing code modifications (See Table 1, ID 5) and provision of links to the code modification website (See Table 1, ID 5) and the ability to search for clauses under change. | Issue 6 |
| 5. | 3.2 | Q2 | Provide cross -code signposting i.e., where codes cross-reference other codes (See Table 1, ID 4). | Issue 4 & Issue 5 |
| 6. | 3.2 | Q2 | **Simplification:** translating code requirements (where possible) from technical prescriptions and legalese into plain English and establishing outcome-based regulation into new rule design. Using plain English (See Table 1, ID 7). | Issue 2 & Issue 3 |
| 7. | 3.2 | Q2 | Removal of duplication (See Table 1, ID 8) from the Grid Code and the Distribution Code. This would mean that there is only one set of the truth held in a single document. | Issue 5 |
| 8. | 3.2 | Q2 | **Rationalisation:** streamlining undue detailed prescription and removing any irrelevant or outdated information. More concise / compact codes (See Table 1, ID 9). | Issue 1 & Issue 3 |
| 9. | 3.2 | Q2 | Providing education and understanding through themed webinars, YouTube videos etc, in the short term for the PDF versions of the existing codes. In the future this could also be applicable to the digitalised versions of the existing codes and for a consolidated code. | Issue 3, Issue 4 & Issue 5 |
| 10. | 4.1 | N/A | Write a 'Single WSTC' scoping document as part of a Consolidation project. For details of delivery and timing regarding the ECR outcome see section 4.4.1 (Q12) in Proposed Delivery Solution 2: | Issue 4 & Issue 7 |
| 11. | 4.1 | N/A | Identify areas of non-alignment and where alignment issues are identified, these will be pursued through the existing code governance process (alignment). | Issue 2, Issue 3 & Issue 5 |

| ID | Section | Question | Proposed Solution | Issues Addressed |
|---|---|---|---|---|
| 12. | 4.1.3 | Q5 | To split up the Grid Code and Distribution Code into smaller sections/clauses and version control each piece separately (Table 4, ID 2). | Issue 1 & Issue 5 |
| 13. | 4.1.3 | Q5 | Include other industry codes into the Consolidation process. If the Steering group approves this solution then the requirement is to recommend to BEIS/Ofgem's ECR, via the code panels, to consider merging other industry codes alongside the Grid Code and the Distribution Code (Table 4, ID 6, 9 & 10). | |
| 14. | 4.1.3 | Q5 | Have the Grid Code and the Distribution Code report to a single governance panel (Table 4, ID 7). | Issue 6 |
| 15. | 4.1.3 | Q5 | Improve the performance of Code Administrators (Table 4, ID 8). | Issue 6 |
| 16. | 4.1.3 | Q5 | Incorporate the SQSS into the Grid Code. | |
| 17. | 4.2.1 | Q6 | Allow digitalised system to point to supporting information within codes and/or supporting standards and/or other codes. | Issue 1, Issue 2, Issue 3, Issue 4, Issue 5, Issue 6 & Issue 7 |
| 18. | 4.2.1 | Q6 | Allow for digital community discussions for collaborative response to issues. | Issue 1, Issue 2, Issue 3, Issue 4 & Issue 5 |
| 19. | 4.2.1 | Q6 | Allow for a digital community to record additional meta data about the codes like Wikipedia. | Issue 1, Issue 2, Issue 3, Issue 4 & Issue 5 |
| 20. | 4.2.1 | Q6 | Allow version control to track previous versions of code. | Issue 1, Issue 2, Issue 3, Issue 4 & Issue 5 |
| 21. | 4.2.2 | Q7 | Self-service with signposting. | Issue 4 & Issue 5 |
| 22. | 4.2.2 | Q7 | Artificial intelligence driven platform. | Issue 4 & Issue 5 |
| 23. | 4.3.1 | Q10 | Digitalise both codes, but on separate platforms. | Issue 4 & Issue 5 |
| 24. | 4.3.1 | Q10 | Include the SQSS under the current Grid Code governance process. | |
| 25. | 4.3.2 | Q11 | Include the Relevant Engineering Standards (RES) within scope of the project | |

*Table 18: Compilation of Recommendations*

| ID | Section | Question | Recommendation |
|---|---|---|---|
| 1. | 4.1.1 | Q3 | These disadvantages should be re-worded as risks and added to the projects risks and issues register. |
| 2. | 4.2.3 | Q8 | Transfer these risks and opportunities into a project risk register. |
| 3. | 4.2.4 | Q9 | Defer decision on this issue until the scoping document for digitalisation is ready. |
| 4. | 4.4.2 | Q13 | Transfer these risks into a project risk register |
| 5. | 5.1 | Q14 | Ensure the additional benefits identified by stakeholders are captured as part of the cost-benefit analysis. |
| 6. | 6.1.1 | Q15 | Steering group to approve the updated governance arrangements. |

*Table 19: Compilation of Proposed Delivery Solutions*

| ID | Section | Question | Proposed Delivery Solution |
|----|---------|----------|----------------------------|
| 1. | 4.4.1 | Q12 | Proceed with alignment independent of ECR |
| 2. | 4.4.1 | Q12 | Develop a scope of work for the Consolidation workstream. Delivery of the work will be deferred until ECR outcome is known. |
| 3. | 4.4.1 | Q12 | Digitalise both codes together on one common platform, independently of ECR. |

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## Appendix 1:     Challenges Identified by Stakeholders by Responding to Question 1 of the Consultation

Table 20 provides extracts from stakeholder responses to their challenges faced with using the technical codes.

*Table 20:  Challenges Identified by Stakeholders by Responding to Question 1 of the Consultation*

| | |
|---|---|
| **1.** | **Technical codes are very long** |
| 1.1. | The complete codes are very long and complex documents. For instance, issue 6, revision 7, of the Complete Grid Code published on 04 October 2021 has 1,010 pages, while the System Operator Transmission Owner Code ("STC") version 18 published on 03 August 2021 is nearly 400 pages; |
| 1.2. | Industry Codes can be long and complex and can be a barrier to entry and engagement by smaller parties. We therefore welcome opportunities to merge, simplify and consolidate the regulatory Code documents. |
| 1.3. | There are a lot of pages in the codes and digitalising sounds like a good idea. |
| 1.4. | They are very lengthy and not the easiest of documents to understand, especially for new entrants. |
| **2.** | **Technical codes are complex** |
| 2.1. | Both the Distribution Code and Grid Code are highly complex and often difficult to understand. |
| 2.2. | Codes are written in legal language, which is often complex and difficult to comprehend, resulting in difficulty in interpreting the meaning of certain clauses |
| 2.3. | The disproportionate effect of code complexity on smaller companies who do not have the resources to engage a dedicated regulatory officer must be acknowledged. |
| **3.** | **Technical codes are not clear** |
| 3.1. | The defined terms are not always clear and can be confusing for new users. |
| 3.2. | There is nothing published that gives a clear overview of which code is applicable to which activity; |
| 3.3. | There are a number of technical codes which are written with varying degrees of specificity. This can sometimes lead to confusion for industry participants when looking to understand which codes are applicable when. |
| **4.** | **It is difficult to identify obligations applicable to a given user within the technical codes** |
| 4.1. | We agree with the stakeholder consultation that the separate technical codes have duplications, which can result in contradictions and in the need for compliance across multiple codes and thus complicates the compliance process. |
| 4.2. | 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. |
| 4.3. | Technical code users also have to grapple with understanding which obligations apply to them by navigating multiple compliance thresholds (e.g., Small, Medium, Large across the TO regions or RfG banding levels), and/or whether they are a market participant. Giving more clarity on these compliance drivers and how the codes fit around them need to be considered too. |
| 4.4. | More work is needed to support new entrants with understanding the commercial consequences behind specific aspects of technical code compliance, e.g., cost, and operational processes to provide 24/7 monitoring and data submission. |

| | |
|---|---|
| 4.5. | It can be difficult to navigate and bring together numerous articles to understand a participant's obligations, but it is not clear that combining the two codes would solve this. |
| 4.6. | I think I agree that the difference between the transmission code and the distribution code can be hard to understand at times. Though I can see why we have different codes for those. In terms of what the challenges are: It's about trying to work out which bits matter. In terms of specific areas, I don't have any that have been pointed out to me. I just have an overall view that finding the bits that matter to you can sometimes be quite challenging. |
| 4.7. | Aside from the fundamental legal complexity of the technical codes' provisions, the lack of user-specific or thematic structuring is perhaps the most actionable issue for this review. |

## 5. Technical codes are difficult to navigate

| | |
|---|---|
| 5.1. | The introduction of a filtering process to make the codes more accessible and the option to tailor the codes to suit an individual user's circumstances would be useful. |
| 5.2. | The codes are lengthy and overly complex and thus a barrier to entry, and also difficult to navigate for parties. |
| 5.3. | The clauses within code documents sign post to other codes and clauses through cross-references, which have no 'clickable' links to aid navigation; |
| 5.4. | Some of the distributed connected customers find navigating the codes challenging at times. This is often when they are new to the process or if Grid Code requirements apply, in addition to Distribution Code requirements. The main challenge is establishing all the areas that are applicable –the current pdf search option helps but it doesn't necessarily guide a user to the correct sections of the codes that need to be reviewed.  Improvements and smarter search intelligence in these areas are welcomed. |
| 5.5. | The technical codes attempt to cover a vast range of topic areas spanning the entirety of the connection journey, leading to a challenging user experience-especially for new entrants. |

## 6. Code Modification Process

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| 6.1. | Main challenges with using the technical codes, and in particular the Grid Code, are in the area of code modifications, which need to be closely aligned from early phases of modifications and throughout their development and implementation.<br>In addition to interlinked IT systems, there are around 150 references to the Grid Code in the BSC, and around 50 references to the BSC in the Grid Code.  The Grid Code modification process does not always take as much account as it could of the impact on other codes or on the need to modify and test interfacing IT systems. |
| 6.2. | One of our main challenges is the lengthy, complex, and resource-intensive code change processes.  It is difficult to resource participation in technical code change. |
| 6.3. | Our biggest problem with Grid Code and Distribution Code is following the change and having the resource to do that ourselves. Where we have had an interest in particular modifications and they often seem to progress really slowly. It's not very transparent, not it's very effective. |
| 6.4. | However, there are issues around the speed of open governance and the fact that the people who were involved in code modifications are the ones who have the time and resources available to do so. |
| 6.5. | I think the primary challenge is the cumbersome governance arrangements around the grid code modifications.  One of my concerns is that it's a very cumbersome project. |
| 6.6. | Pace of change is an area where I would like to see change as in the INA industry things come along and require quick reaction.  I just worry that putting the Distribution Code (DC) content into a bigger pot will slow it down. We see that with the DNOs anyway. As soon as you put it into ENA, everyone's got a vested interest, and wants to move at their pace. I'm not sure that has been properly considered as all the parties that are involved are the ones that slow things down. |
| 6.7. | The Distribution Network Operators' (DNOs) pace is not quick enough.  Having to try and drag NGESO along will be quite a challenge and a frustration. |
| 6.8. | We have experienced onerous new requirements for power generation compliance placed on us unintentionally via 'minor technical changes' to D-Code EREC G99, including changes not |

| | shown in consultation documents. The ENA DER Technical Forum has been helpful in facilitating correction of such defects without the need for the market participants impacted having to raise a modification themselves. If the codes are merged, we would not want an outcome where it becomes harder for network users to get such issues corrected in a timely manner. |
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| 6.9. | Conversely, it is incredibly difficult to follow Distribution Code change on the D-Code website: it appears that not all modification/workgroup documents are placed online and more recently I tried finding a final D-Code report for a change referenced by Ofgem and was not able to locate it, even after e-mailing the D-Code administrator |
| 7. | Technical Codes comprise duplication of information |
| 7.1. | We agree with the stakeholder consultation that the separate technical codes have duplications, which can result in contradictions and in the need for compliance across multiple codes and thus complicates the compliance process. |
| 7.2. | Information covering related topics and/or technical requirements can be spread across multiple technical codes and it can require cross-referencing to be sure of compliance. |