

Grid Code Review Panel

Thursday 27th February 2020

National Grid ESO Offices, Faraday House, Warwick

WebEx details

Meeting link (copy into web browser):

<https://uknationalgrid.webex.com/uknationalgrid/j.php?MTID=m60de074b81138b54635d60142c0df4c1>

Or in slideshow view [Click here to access the meeting via WebEx](#)

Audio connection:

Telephone: 020 7108 6317

Access code: 597 671 462

Welcome



nationalgridESO

Introductions and Apologies for absence

Apologies

Steve Cox

Joe Underwood

Rob Pears

Alternate

Graeme Vincent : [Steve Cox]

Chrissie Brown (Code Administrator, Technical Secretary)

Presenters

Matt Magill & Graham Stein

Ian Povey – GC0139

Biniam Haddish – GC0138

Observers

Jeremy Caplin

Matt Baller

Update to the Panel on options for SQSS modification relating to August 9th Ofgem report

Matt Magill
National Grid ESO

Graham Stein
National Grid ESO





Approval of Panel Minutes

19 December 2019

Actions Log

Review of the actions log





Chair's Update

**An update from the
Chair about ongoing
relevant work,
discussions etc.**

Authority Decisions

- **GC0096** 'Energy Storage'
- **GC0105** 'System Incidents Reporting'



GC0138 - Compliance process technical improvements (EU and GB User)

Biniam Haddish
National Grid ESO



GC0138 Compliance Processes Improvement Background

The Compliance Processes (CP) were added to the Grid Code some 8 years ago to provide a framework for Users to demonstrate compliance with the Grid Code and Bilateral Connection Agreement.

Prior to this, the process existed in solely in Guidance Notes updated periodically by National Grid based upon from experience.

In parallel with adding the CP, details of the practical on-site testing of generators for compliance was updated in existing Grid Code OC5 “Testing and Monitoring”

European Compliance Processes (ECP) were added recently for EU Users equivalent to the CP & OC5.

GC0138 Compliance Processes Improvement (EU & GB Users) – Defects Summary

Final compliance testing with all stakeholders present on site is effective but can be burdensome and increases travel risk.

Fault Ride Through simulations do not represent outage scenarios and commissioning stages.

Grid Code Connection Conditions changes on voltage control for non-synchronous plant were not reflected in the Compliance Process.

Fault Ride Through testing of the next generation of large Wind Turbines may be impractical using portable on site test facilities.

Some aspects of HVDC Interconnector systems compliance might be more efficiently demonstrated in a Factory situation.

Summary of Proposed Modifications – (i) Site Testing

Detailed changes to CP, ECP and OC5 detailing site testing to procedures to deliver:

- a high probability of success for Users making the test requirements clearer; and,
- quick turn around of assessment by ESO; while,
- reducing burden and risk of having everybody attend site.

Summary of Proposed Modifications – (ii) Simulations

Changes to simulation requirements for Synchronous Generators to align CP, ECP and on-site testing.

Additional simulation for a Power Park Module to demonstrate (European) Connection Conditions requirement A.7.2.3.1 (ii).

Additional requirements for Wind Farms to carry out Fault Ride Through studies for different loading conditions and reasonable depleted network scenarios eg. export cable, primary transformer outage, switching groups.

Summary of Proposed Modifications -

(iii) Submission Format

Specify:

- Formats for submitting test results for each plant type or test being made
- Information included on test log sheets.

This is the currently included in the Guidance Notes published on the NG ESO Grid Code web pages and is to facilitate quicker response to Users when NG ESO has not witnessed testing on site.

Summary of Proposed Modifications -

(iv) Factory Testing

Allow Fault Ride Through testing in a factory test facility instead of a field test. Manufacturer concern impractical with the next generation of offshore wind turbines.

Include of Factory Acceptance Testing on HVDC Control Schemes prior to shipment to site (in addition to Equipment Certificates) to reduce the scope of on site testing where agreed by NG ESO.



Proposer Recommended Governance Route

The Proposer recommends that this Modification follows the standard governance route and proceed to Workgroup.

The timeline will be agreed at 1st workgroup meeting.

Critical Friend Feedback: GC0138

Code Administrator comments	Amendments made by the Proposer
<ul style="list-style-type: none">• Paragraph restructuring• Simplified language suggested where relevant• Acronyms/terms expanded/defined• Legal text moved to annex• More explanation on the impact on other codes• Summary of solution added• Challenged impact on objectives• Implementation date added• Hyperlink to reference material added	<ul style="list-style-type: none">• The proposer accepted most of the simplified language changes and paragraph restructure changes.• The proposer added some additional changes to structure including bullet points to aid readability.• The proposer accepted all of the other changes and gave more reasons to justify their identified impact on the code objectives

Does GC0138 meet the Self Governance Criteria?

Self-Governance Criteria

A proposed Modification that, if implemented,

(a) is unlikely to have a material effect on:

- (i) existing or future electricity consumers; and
- (ii) competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution or supply of electricity; and
- (iii) the operation of the National Electricity Transmission System; and
- (iv) matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies; and
- (v) the Grid Code's governance procedures or the Grid Code's modification procedures, and

(b) is unlikely to discriminate between different classes of Users

Panel Decision

Does the Panel agree that:

- This is a standard governance modification?; and
- This modification should proceed to Workgroup?

Energy Networks Association

GC0139: Enhanced Planning Data Exchange to Facilitate Whole System Planning

Grid Code Review Panel Meeting: 27 February 2020

GC0139 – Enhanced Planning Data Exchange to Facilitate Whole System Planning

Open Networks Project

- Sub-group of the Open Networks project has been investigating the requirements for planning data exchange to facilitate the transition to a smart, flexible energy system.
- This modification proposal seeks the codification of the project's proposals for an enhanced level of planning data exchange between DNOs and NGENSO

The Defect

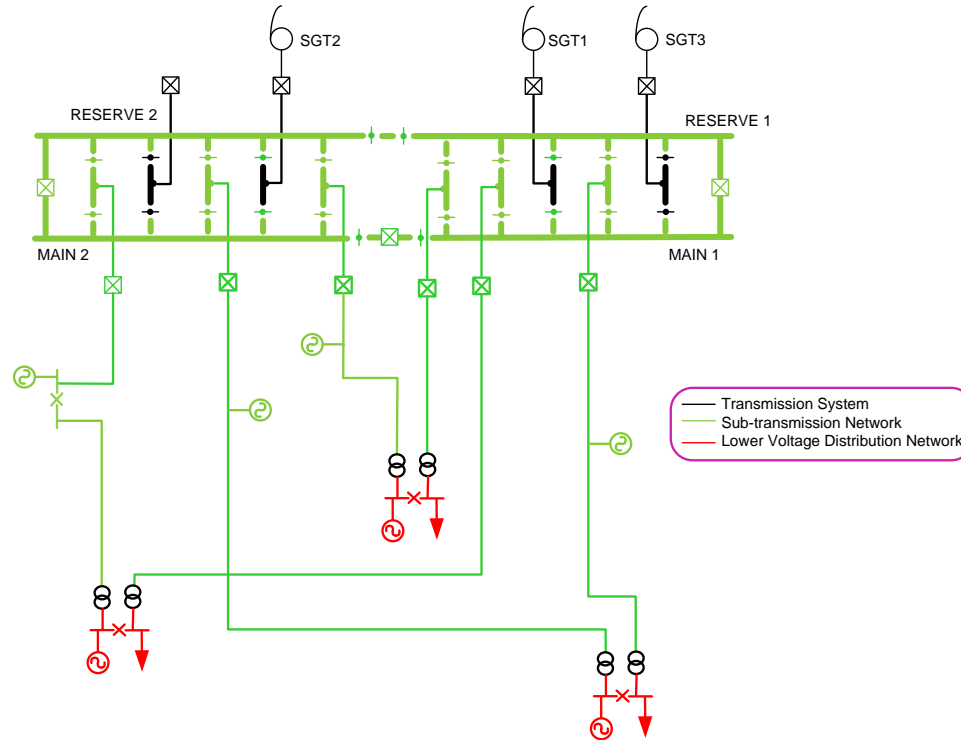
- The existing requirements of the Grid Code (Week 24, Week 50 & Week 42) are insufficient for the coordinated and efficient planning of their networks as the industry transitions to a smart energy system and distribution operation activities.

GC0139 - Requirements for D to T Data Exchange

DNOs to provide NG:

- Full details of the sub-transmission network and any connections directly connected to the sub-transmission network
- Details of all distributed energy resource connections greater than 1MW to the distribution network and their impact on energy flows at cardinal demand points; peak demand, summer minimum demand and solar-peak/daytime-minimum demand.
- Details of all distributed energy resource greater than 1MW 'accepted' to be connected to the distribution network and their anticipated impact on energy flows at cardinal demand points; peak demand, summer minimum demand and solar-peak/daytime-minimum demand.
- Details of all distributed energy resource connections less than 1MW to the distribution network, aggregated by fuel type and disaggregated by substations connecting to the sub-transmission network.

GC0139 - Requirements for D to T Data Exchange



GC0139 - Requirements for T to D Data Exchange

NG to provide DNOs:

- A set of models of the transmission system that represent the generation dispatch and demand at the following cardinal points:
 - Maximum fault level
 - Peak demand,
 - Summer minimum demand,
 - Solar-peak/daytime-minimum demand,
 - National high power transfer dispatch scenario, and
 - National low power transfer dispatch scenario.
- These models will be switch level models in a single boundary format and, detailing transmission asset ratings,

25

GC0139 – Process & Other Code Implications

- CUSC modification CMP298 (Statement of Works) is currently under consideration of a working group. Although, CUSC will not specify the detail of the data exchange requirement it is proposed that the Statement of Works and Week 24 data provision to NGENSO should be aligned utilising expanded schedule 5 and 11 data tables as detailed in this GC Mod.
- Through D-Code requirement (or other) IDNOs provide data to ensure data provision is complete.
- Enhanced data exchanges triggered for a Licence area when an Appendix G to the BCA is established – straight away in many cases!
- At this time NG to exchange its enhanced level of data at Week 42
- There is a possibility that there may need to be consequential changes made to the STC following this modification. It is therefore proposed that any change arising from this Grid Code modification which has an impact on the STC is notified to the STC Panel so that the necessary consequential changes can be made.

GC0139 – Proposer Recommended Governance Route

- The Proposer recommends that this Modification follows the standard governance route and proceed to Workgroup.
- The timeline will be agreed at 1st workgroup meeting.

Critical Friend Feedback: GC0139

Code Administrator comments	Amendments made by the Proposer
<ul style="list-style-type: none">• Title Change to improve the understanding of what the mod is setting out to achieve.• Simplified language suggested where relevant• Acronyms/terms expanded/defined• Additional explanation on the impact on other codes	<ul style="list-style-type: none">• The proposer accepted the expansion suggestion for the title• The proposer accepted the simplified language changes and paragraph restructure changes.• The proposer accepted all of the other changes and gave more reasons to justify their identified impact on the code objectives

Does GC0139 meet the Self Governance Criteria?

Self-Governance Criteria

A proposed Modification that, if implemented,

(a) is unlikely to have a material effect on:

- (i) existing or future electricity consumers; and
- (ii) competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution or supply of electricity; and
- (iii) the operation of the National Electricity Transmission System; and
- (iv) matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies; and
- (v) the Grid Code's governance procedures or the Grid Code's modification procedures, and

(b) is unlikely to discriminate between different classes of Users

Panel Decision

Does the Panel agree that:

- This is a standard governance modification?; and
- This modification should proceed to Workgroup?



In Flight Modification Updates

Review of all Grid Code modifications with current status, next steps and any Panel recommendations

Dashboard – Grid Code (as at 19 February 2020)

Category	Sep	Oct	Nov	Dec	Jan	Feb
New Modifications	2	3	0	2	0	2
In-flight Modifications*	13	15	18	19	20	20
Modifications issued for workgroup consultation	0	1 GC0113	0	1 GC0130		1 GC0135
Modifications issued for Code Administrator Consultation	2 - GC0125, GC0129,	1 – GC0127/ GC0128	2 - GC0096, GC0105	1 – GC0135		1– GC0107/ 113
Workgroups held	3	5	2	1	4	2
Authority Decisions	0	0	0	1 GC0129	0	0
Implementations	1 - GC0123	0	0	0	0	3 GC0125/ 127/128
Modifications on Hold	2	2	2	2	1	1
Workgroups postponed due to quoracy issues	0	0	2 (GC0131, GC0132)	0	0	0

Grid Code Workgroups for next 3 months (as at 19 February 2020)

	Completed	Booked in	To be arranged	No further Workgroups needed	New Mods
GRID CODE	January	February	March	April	May
GC0132	07/01/2020 (PM)				
GC0131	20/01/2020 (PM)		x?		
GC0130	14/01/2020	17/02/2020			
GC0109			x?		
GC0134	17/01/2020	05/02/2020	x?		
GC0117				x?	
GC0103				x?	
GC0136					
GC0137			x?		
GC0138					
GC0139					

CUSC Workgroups for next 3 months (as at 19 February 2020)

	Completed	Booked in	To be arranged	No further Workgroups needed	New Mods
CUSC	January	February	March	April	May
Tranche 1 - TCR Modifications and High Priority Charging Modifications					
CMP332	13, 14, 28 and 29 January		5 and 6 March		
CMP334			2 March?	20 and 21 April	
CMP335/336		25/02/2020	12 and 16 March	28/4/20	04/05/20
CMP333	16 and 23 January	7, 13 and 19 February	10/03/20		
CMP327/CMP317	15 and 22 January	3 and 7 February	17, 25 and 31 March		
CMP324 / CMP325	21/01/20	18/02/20	26/03/20		
CMP308					

CUSC Workgroups for next 3 months (as at 19 February 2020)

	Completed	Booked in	To be arranged	No further Workgroups needed	New Mods
CUSC	January	February	March	April	May

Tranche 2 - Modifications to be progressed in Q1 2020 where gaps arise

CMP311			x?		
CMP326				x?	
CMP316				x?	
CMP304			x?		

CUSC Workgroups for next 3 months (as at 19 February 2020)

	Completed	Booked in	To be arranged	No further Workgroups needed	New Mods
CUSC	January	February	March	April	May

Tranche 3 - Modifications to be progressed from Q2 2020 (prioritisation order to be determined in early March 2020)

CMP286/CMP287					
CMP288/289					
CMP291					
CMP298					
CMP300					
CMP315					
CMP328					
CMP330					
CMP331					
CMP337					
CMP338					

Discussions on Prioritisation



Prioritisation principles

Complexity The defect addressed by the proposed modification has implications for many different areas of the energy system which need to be taken into consideration throughout the process. The technical complexity and cross code impact of the modification will most likely require significant use of industry time and a higher than average number of workgroups to conclude the process.

Importance The perceived value and risk associated with the proposed modification. The value / risk could be considered from a number of different perspectives i.e. financial / regulatory / licence obligations both directly for customer and end consumers more generally.

Urgency A proposed modification which requires speedy consideration within the code governance process, as well as the timescales for implementation within the respective code.



Blockers to Modification Progression

(February, May, August, November)

Blocker Code	Jan 2020		Feb 2020		Comments
	Count	Mods affected	Count	Mods affected	
Quoracy	1	GC0130	0		Could not be quorate for a workgroup meeting in January as full membership is 5 for this Workgroup.
Prioritisation	0		0		NONE
ESO delay	1	GC0136	1	GC0136	Slight delay in getting the final version of the legal text to Panel this month but good progress has been made and on track for March Panel.
Code Administration delay	0		1	GC0137	Slight delay in getting workgroup setup due to high level of nominations received. Panel directive to be sought.
Industry delay	1	GC0109	0		Input sought from Proposer in order to progress.
Legal issues	1	GC0132	1	GC0132	Slight delay due to legal text being finalised following comments and being presented at February panel.
Ofgem send back	0		0		NONE

Break



Workgroup Reports

GC0130 'OC2 Change for simplifying 'output useable' data submission and utilising REMIT data'

GC0132 'Updating the Grid Code governance process to ensure we capture EBGL change process for Article 18 Terms and Conditions (T&Cs)'

GC0130: OC2

Change for simplifying 'output useable' data submission and utilising REMIT data

Nisar Ahmed – Code
Admin NGESO



GC0130 Background

- GC0130 was proposed by National Grid ESO (William Jones) in August 2019.
- The current system used by Generators and interconnectors for submitting outage and output useable data is called **Transmission Outages Generator Availability** (TOGA). This system is currently reaching the end of its life and is soon to be decommissioned.
- Feedback from industry workgroups highlighted that Generators no longer want to submit data to TOGA as they are already required to submit higher resolution data under the **Regulation on Wholesale Energy Markets Integrity and Transparency** (REMIT) obligations. Therefore there is duplication of data submission.
- Data is only submitted once a day and does not reflect current market conditions thus causing distortion and reducing accuracy.
- Generators need to remain compliant with the requirements of **Operating Code no. 2** (OC2). Non-compliance could result in the Authority taking enforcement actions.

GC0130 - Proposal

- When this change is made, generator availability and outage submission data could be submitted either via TOGA or REMIT.
- Reduce the availability data requirement from up to 5 years to 3 years as there is less value in the longer-term data beyond 3 years, which is in line with current REMIT data requirements.
- Generators will only need to submit data when there is a change to their planned Output Useable values
 - daily, weekly and yearly submissions to TOGA are no longer required.
- Change the text to allow automation of **Negative Reserve Active Power Margin (NRAPM)** forecasting and publication.
- Remove reference to the OC2 Zonal process.
- NGENSO will work with Generators during the transition from current TOGA System so in future they can submit data either via the new TOGA system or the Market Operation Data Interface System (MODIS) or the Elexon REMIT portal. This process is being managed separately but will not affect the Grid Code changes to OC2 which would still enable data to be submitted either via REMIT or TOGA.

GC0130 Terms of Reference

The Workgroup conclude that they have met their Terms of Reference which were:

Specific Area	Location in the report
a) Implementation and costs	Section 4
b) Review draft legal text should it have been provided. If legal text is not submitted within the Grid Code Modification Proposal the Workgroup should be instructed to assist in the developing of the legal text;	Annex 2
c) Consider regulatory implications on generators <100MW	Section 4
d) Consider cross code impacts particularly the BSC	Section 4

GC0130 Workgroup Discussions

- Three workgroup meetings held.
- The following options were considered by the Workgroup:
 1. No change (status quo);
 2. Only using REMIT for data submission; or
 3. Only using TOGA for data submission
 4. Providing a choice of using REMIT or TOGA for data submission

GC0130 Workgroup Discussions

Cross Code Impacts

The Workgroup agreed that the Balancing and Settlement (BSC) code would be affected and agreed the BSC modification should be raised concurrently with this modification. ELEXON advised that they believe that minor changes to the BSC would be required.

Implementation and costs

ELEXON advised that there may be a requirement to make IT changes to the REMIT platform. The costs of this are currently unknown until the solution has been agreed. Planning for an implementation date of 5th November 2020. This aligns with the standard BSC release (the corresponding BSC modification needs to be submitted at the same time as the Grid Code change) and will allow sufficient time for industry users to make the necessary system changes.

Implications on generators <100MW

The Proposer believes the REMIT data (as opposed to TOGA data) is more transparent for the market. The Proposer advised that at present 80% of market participants that would be affected by this modification currently submit their data through REMIT. Interconnectors submit to TOGA and are also subject to REMIT reporting obligations. A workgroup member highlighted that interconnectors can submit their data directly to ENTSO-E.

GC0130 Workgroup Consultation

- GC0130 Workgroup Consultation ran from 2 December 2019 to 23 December 2019 with 5 responses received, including 2 from Interconnectors.
- All respondents were supportive of the Proposer's solution and believe that it better facilitates the Grid Code Objectives.
- None of the respondents raised an alternative for the Workgroup to consider.
- It was felt that the a more detailed timetable for the TOGAplatform would be required.
- The impact on interconnectors needed to be clarified. Interconnectors do submit to TOGAand are also subject to REMIT reporting obligations and this needs to be corrected in the consultation document.
- An average lead time of 3 to 6 months is required to modify existing systems for the change.

Workgroup Vote – 14 January 2020

GC0130 Vote

- The Workgroup concluded unanimously (5 out of 5 votes) that the Original better facilitated the Applicable Grid Code Objectives than the baseline.
- That the Original is the best option overall.
- There were no alternatives to be voted on.

Timetable

The Code Administrator recommends the following timetable:	
Initial consideration by the Workgroup	1 October 2019
Workgroup Consultation	2 December 2019
Workgroup Consultation closes	23 December 2019
Workgroup Report issued to Panel	19 February 2020
Workgroup Report presented to Panel	27 February 2020
Code Administrator Consultation period (15 working days)	13 March – 03 April 2020
Draft Self Governance Report issued to the Grid Code Review Panel	14 April 2020
Draft Self Governance Report presented to the Grid Code Review Panel	22 April 2020
Grid Code Review Panel decision	22 April 2020
Issue to Panel to confirm votes held at Panel (5 working days)	27 April 2020 – 04 May 2020
Appeal window (15 working days)	05 May – 28 May 2020
Decision implemented in Grid Code	05 November 2020

GC0130 – Asks of Panel

The Panel is invited to:

- Consider whether the Workgroup has met its terms of reference; and
- Agree for GC0130 to proceed to Code Administrator Consultation

GC0132: Updating the Grid Code governance process to ensure we capture EBGL change process for Article 18 Terms and Conditions (T&Cs)

Chrissie Brown –
Code Admin NGENSO



Background

- **GC0132** was raised by National Grid ESO and was submitted to the Grid Code Review Panel for their consideration on 27 September 2019
- Quoracy could not be reached for GC0132; two Panel members put themselves forward at the November GCRP meeting to progress the modification. Three Workgroup meetings have been facilitated.
- Three alternatives (WAGCMs) have been developed alongside the Proposer's solution

Workgroup Vote: The Workgroup concluded that all solutions (WAGCM1, WAGCM2 and WAGCM3) better facilitate the Grid Code objectives. They agreed by majority that the best solution is WAGCM1.

GC0132 solutions overview

Proposer solution	<p>One-month consultation carried out at Code Administrator Consultation stage of the process for only those modifications that affect the Article 18 T&Cs related to balancing, as outlined in Annex GR.B.</p> <p>TSO (The Company) to consider responses received and provide justification as to whether responses should be taken into account or not as part of the Draft Final Modification Report stage of the process.</p>
WACGM1	<p>The process that has been drafted for the Original solution would be carried out for all future modifications raised to the Grid Code.</p>
WACGM2	<p>The change would be the same as identified in the Original solution apart from The Company, as TSO would delegate their responsibility under Article 10(6) to the Grid Code Review Panel (GCRP) who would then perform that task, namely that the GCRP "... shall duly consider the views of stakeholders resulting from the consultations undertaken in accordance with paragraphs 2 to 5, prior to its submission for regulatory approval. In all cases, a sound justification for including or not including the views resulting from the consultation shall be provided together with the submission and published in a timely manner before or simultaneously with the publication of the proposal for terms and conditions or methodologies."</p>
WACGM3	<p>This would be a combination of WACGM1 and WACGM2 meaning that the process identified would apply for every future Grid Code modification raised and the GCRP would carry out the responsibilities outlined in Article 10(6).</p>

GC0132 Terms of Reference

Term of reference	Location in Workgroup Report
a) Implementation;	Section 5. Please note the discussion around GC0136. A Workgroup member was of the view that the new process should have been covered since 4 August 2019.
a) Review draft legal text should it have been provided. If legal text is not submitted within the Grid Code Modification Proposal the Workgroup should be instructed to assist in the developing of the legal text;	The full legal text, which was reviewed can be found in Annex 2
a) Consider whether any further Industry experts or stakeholders should be invited to participate within the Workgroup to ensure that all potentially affected stakeholders have the opportunity to be represented in the Workgroup;	Section 3 and 4
a) Apply some or all of the provisions of EBGL to all modifications; and	Section 3 and 4. This is covered in alternative 1 raised.
a) Consider if Workgroup Consultation needed	Section 3 and 4. The Workgroup considered this and decided not to hold a Workgroup Consultation.

Has the GC0132 Workgroup met their Terms of Reference?

Timeline – if TOR met

Stage gate	Date
Workgroup Report presented to Grid Code Review Panel	27 February 2020
Code Admin Consultation Report issued	w/c 16 March 2020
Draft Modification Report issued to Industry and Panel (5 Working Days)	14 April 2020
Draft Final Modification Report presented to Panel and Recommendation Vote carried out	22 April 2020
FMR circulated to Panel (5 Working Days)	23 April 2020
Final Modification Report submitted to the Authority	4 May 2020
Authority Decision (25WDs)	10 June 2020
Implementation	by 25 June 2020

Reports to the Authority

None



Implementation Updates

GC0125 - EU Code Emergency & Restoration: Black Start testing requirements for Interconnectors

GC0127 & GC0128 - EU Code Emergency & Restoration: Requirements resulting from System Defence Plan



Electrical Standards

None



Governance

**Most efficient number of
Workgroup members for
highly subscribed
modifications**



Grid Code Development Forum and Workgroup Day(s)



Grid Code Development Forum and Workgroup Day(s)

February Grid Code Development Forum and Workgroup Days

Workgroup Days – 04/05 February 2020

GCDF - 05 February 2020

March Grid Code Development Forum and Workgroup Days

Workgroup Days – 03/04 March 2020

GCDF - 04 March 2020

Kick start of GC0117 – to be represented by Garth Graham



Standing Items

- **Distribution Code Panel update**
- **JESG Update**

Update on Other Industry Codes

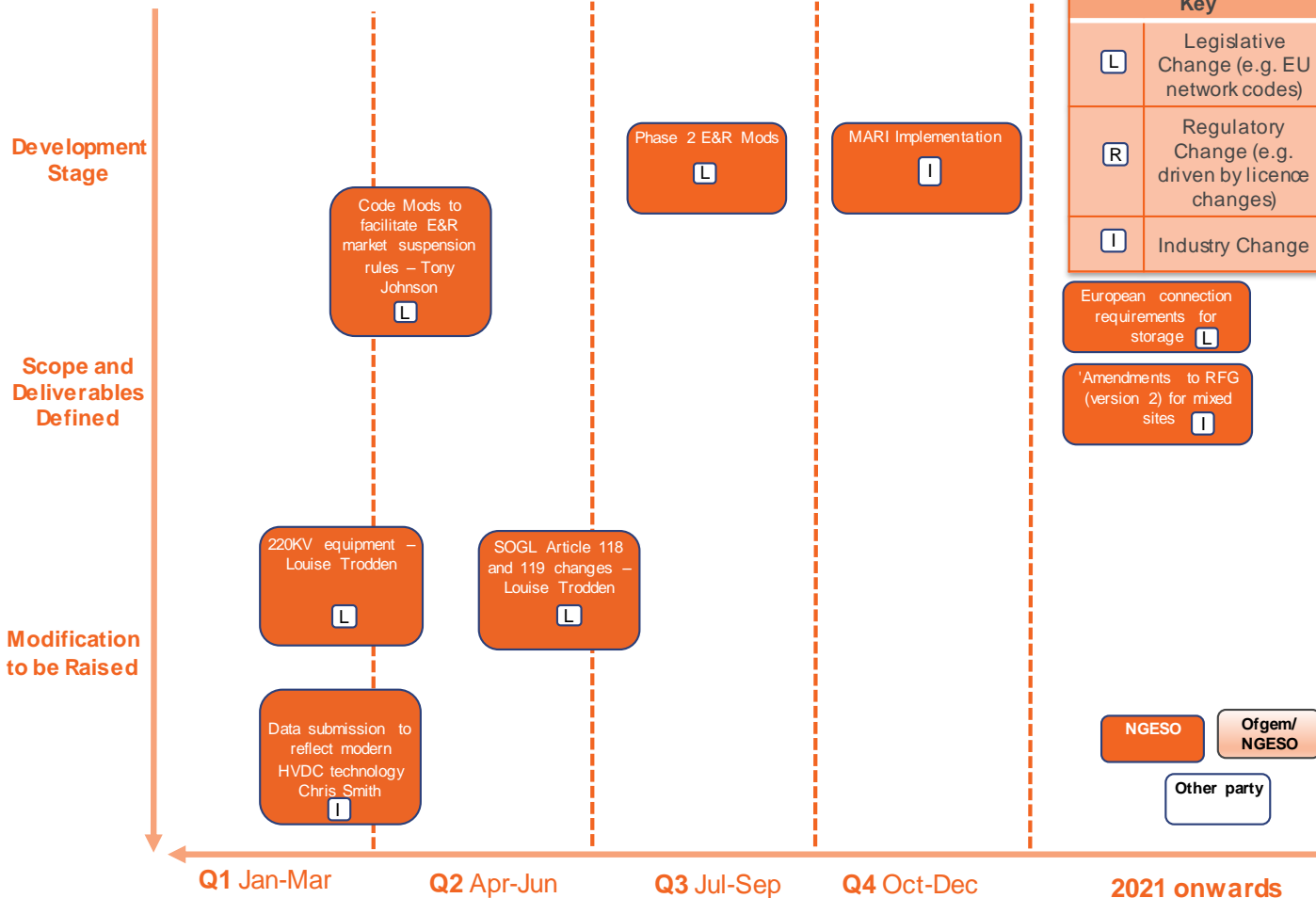




Horizon Scan

(February, May, August,
November)

Grid Code Horizon Scan* ~ February 2020



CACoP Horizon Scan (Cross Codes)

The CACoP Horizon Scan provides a combined view of all the Code Administrators key legislative and regulatory changes expected to impact the industry. It is true at the time of publication and is intended for indicative purposes only. The CACoP Horizon Scan will be used by Code Administrator's to co-ordinate any changes that have cross code impacts and can be found here:

<https://www.nationalgrideso.com/codes>

CACoP Update

None





Forward Plan Update (Customer Journey)

(January, March, May, July,
September, November)

- **Forward Plan
Deliverables**

Next Panel Meeting

10am on 26 March 2020 at Faraday House, Warwick, CV346DA

Modification Proposals to be submitted by 11 March 2020

Papers Day – 18 March 2020



Close and Lunch

