Public

Code Administrator Meeting Summary

Workgroup Meeting 4: Generator and Interconnector Availability During a Severe Space Weather Event

Date: 04 September 2025

Contact Details

Chair: Claire Goult, claire.goult@neso.energy

Proposer: Helen Newman, helen.newman@neso.energy

Key areas of discussion

The Chair confirmed that the aim of Workgroup 4 was to review the Workgroup Consultation responses, discuss the Proposer's response to the Workgroup Consultation, review the draft Legal Text, and review the draft Workgroup Report.

Workgroup Consultation responses

The Chair talked the Workgroup through a summary of the responses received to the Workgroup Consultation. Workgroup members noted that one of the 'Interconnector' respondents represents more than one interconnector and the 'Generator/Storage' respondent represents more than one Generator. The Chair agreed to update the Workgroup Report to remove references to specific numbers of responses and instead describe the spread of parties represented.

Proposer's update

The Proposer provided an update to the specific concerns raised in the Workgroup Consultation responses. The substantive points raised were:

Implementation approach and timescales

The Proposer acknowledged that the 10 Business Day implementation timescales are unlikely to work operationally. Their suggestion was that the implementation is stated to be subject to confirmation of the timescales required to make available the necessary communication systems and they welcome further industry discussion on the issue.

A Workgroup member suggested that other than updates to IT systems required by NESO to implement this modification, they did not see any reason for Users to need any IT updates, as all the required IT systems should already be in place. They also suggested that taking into account all the additional steps required to implement this modification, industry will have around 8 weeks to prepare for any IT updates that may be required. The Workgroup noted this suggestion and made no further comment.

The Workgroup made no further comments on the suggested 8 weeks preparation time, but did discuss the reasons for believing the 10 Business Day implementation period would be difficult to meet. A Nuclear Generator Workgroup member noted that they will need to document and proceduralise their response to the implementation of this modification and the 10 Business Day implementation period would be difficult to meet. An Interconnector Workgroup member noted that the notifications have yet to be shared, so they are unable to prepare for them in advance of the implementation date. They also noted that as they current don't use BMRS, they would need to establish alternative processes and procedures, which will take time.

The Proposer confirmed that the Space Weather Industry Protocol will be shared with industry in the next few weeks, which should help industry understand the steps required and to start putting processes in place. They shared on-screen an early draft of the 'Space Weather Possible Notification' and confirmed that all notifications will be shared through the control room distribution lists, so users won't need to rely on BMRS. They noted that users can subscribe to the Met Office notifications for G1 – G5 space weather events. A Workgroup member noted that this modification specifically relates to NESO notifications and not Met Office notifications.

A Workgroup Observer noted that many Grid Code users will only become aware of the new obligations from this modification once it's implemented, won't have prepared for it, and won't have organisational provisions for space weather events. The Proposer confirmed that NESO will use appropriate communications channels to inform potential users of the implementation of this modification and the obligations for users.

A Workgroup member asked if the Space Weather Industry Protocol will provide clarity on the check levels required, as the modification won't include details of the GIC assessment. The Proposer confirmed that the protocol will provide high-level background information on GICs and space weather, including characteristics that might make assets more vulnerable. However, it will not provide a method for assessing assets or equipment, nor will it specify the anticipated impacts of GICs.

<u>Obligations for users</u>

The Workgroup discussed the obligations for this modification, agreeing that it won't obligate users to carry out assessments but will obligate them to inform NESO of their intended response to a space weather event. They noted that the modification appears to oblige Users to respond

to a NESO Space Weather Notification, which is a new obligation, but Users may decide not to do anything operationally as a result of that Notification. Workgroup members asked whether they can choose not to respond to NESO following a Notification, should they decide not to change their operational status. The Proposer confirmed that they can choose not to respond, and NESO will assume this means that they're operating as usual, but NESO would prefer that everyone responds even if it's with a nil response e.g. a response that confirms they will not change their operational status.

A Workgroup member raised concerns about whether the Modification obligates generators to perform space weather risk assessments or just to declare their intended operational status. The Proposer clarified that the modification only requires generators to declare their position (e.g. staying online or coming offline) in response to NESO's notification, not to perform a formal assessment. If a Generator does not respond, NESO will assume business-as-usual (BAU) operation based on previous values. Workgroup members discussed that for Generators without prior space weather procedures, compliance would mainly involve setting up a simple process for their control room to respond to notifications. They noted that, in practice, many may choose to continue as usual without additional assessment, since the modification does not obligate further action.

Workgroup members noted that the technical assessment of GIC risk is complex and depends on factors like equipment type, location, and site characteristics. However, this modification does not require such detailed assessment, generators are only expected to declare their intended action based on current knowledge. The Chair noted that accounting for users' knowledge / preparedness for space weather events and their ability to assess GIC risk is outside the scope of the modification, which is focused on information flow rather than technical assessment capability.

A Workgroup member suggested a two-tier approach: parties could submit a one-off declaration (e.g. always stay on or always come off) within 10 days of the modification being implemented, which would then be updated annually as part of the standard Week 24 data submission. If a party does not submit this, they would be obligated to respond in real time within three hours of a NESO notification. This would ensure NESO receives universal responses while minimising unnecessary real-time processes for parties with a clear, enduring position.

The NESO SME acknowledged the value of a hybrid approach (combining real-time and Week 24 data submissions) but raised concerns about the practical implications for operational staff, specifically how ENCC or similar teams would process and cross-check different sets of data. They suggested this is more of an operational implementation issue rather than a codes consideration.

Intent of the modification

The Chair asked the Workgroup that they understood, and were content with, the intention of the modification, which is for Users to notify NESO of their intentions following a space weather event and that there is no obligation for them to establish an assessment. An Interconnector Workgroup member noted that they support the intent of the modification but notifying NESO of their intentions following a space weather event will lock them into an action, so should they subsequently decide to change their position, they will be in breach of the Grid Code. They stated that the draft Legal Text does not appear to reflect the practical implications of reacting to a space weather event and doesn't allow for flexibility.

The Proposer explained that allowing changes after the declaration would undermine the purpose of the modification, as NESO would not have reliable information to secure the system if parties could change their positions at the last minute. The Interconnector Workgroup member acknowledged this but argued that there could be legitimate reasons for needing to change position after the three-hour window, such as new information or operational constraints, and that the current drafting does not allow for this flexibility.

The Proposer and a Workgroup member emphasised that the mod does not require parties to change their risk appetite or operations, only to inform NESO if they intend to change their position due to a space weather event, and that the notification relies on the best available knowledge at the time. A Workgroup member highlighted that the modification provides time for organisations to improve their assessments and processes before it goes live, and that the intent is to give NESO as much certainty as possible for system planning.

Active vs Passive Responses

A Workgroup member asked whether, if a Generator declares they will stay on during a space weather event but later observes abnormal conditions (e.g. rising transformer temperatures) and decides to disconnect to protect plant or people, this would be treated as a breach of the Grid Code or as a fault. The NESO SME and Proposer confirmed that this would be considered a fault, not a breach, as it aligns with standard operational practice to protect equipment and would not be treated as non-compliance. The Workgroup agreed that justified deviations for safety reasons would not be considered breaches, but Generators would need to provide evidence if questioned later. This clarification will be included in the Workgroup Report.

Draft Legal Text

Glossary and Definitions

Space Weather Awareness Notification – The NESO SME suggested removing the Space Weather Awareness Notification unless it was referenced elsewhere, but a Workgroup member suggested keeping it as Space Weather Awareness Statement to provide industry-wide awareness, even if

no action is required. There was consensus among the Workgroup that these definitions were an improvement, with minor feedback on formatting.

Balancing Code 1(BC 1)

The Workgroup discussed the location of the new requirements. The NESO SME presented options for placing the legal text in OC2, BC1, or referencing OC2 from BC1. Workgroup members noted that if the Week 24 (annual/pre-populated) data submission is included, OC2 is preferable since it already handles such data. No strong objections were raised to any option, but the Workgroup agreed the final decision depends on the inclusion of the Week 24 concept. The Proposer will consult NESO Legal and SMEs before finalising the approach.

Draft Workgroup Report

A Workgroup member raised a concern about a scenario where a Generator declares they will stay on during a space weather event but then experiences abnormal conditions (e.g. excessive transformer temperatures) and decides to disconnect for safety reasons. He asked whether this would be considered a hard non-compliance or treated as a fault, emphasising the need for clarity on enforcement and justification.

The NESO SME and Proposer confirmed that in this situation it would be treated as a fault, not non-compliance, provided the operator can justify the action (e.g. evidence of abnormal equipment conditions) and that standard BAU processes would apply, with the operator notifying NESO as usual. A Workgroup member expressed concern about future interpretation and suggested written guidance. The Workgroup agreed that deviation from the declared position due to safety or equipment protection, if properly justified, would not be treated as non-compliance. This point will be clarified in the Workgroup Report.

Terms of Reference (ToR)

The Chair noted that updated wording for ToR (f) was approved by the Grid Code Review Panel during their August meeting.

Actions

The Chair confirmed that the only remaining open Action (Action 9) has been addressed in the Workgroup meeting and will be closed.

Next Steps

The Chair noted that an additional Workgroup may be needed, subject to any Alternative Requests being raised and the Proposer finalising the solution and draft Legal Lext.

Actions

For the full action log, click here.

Action Number	Workgroup Raised	Owner	Action	Due by	Status
9	WG2	CG	Update ToR and take slide to GCRP.	21 August 2025	Closed

Attendees

Name	Initial	Company	Role
Claire Goult	CG	NESO	Chair
Matthew Larreta	ML	NESO	Technical Secretary
Helen Newman	HN	NESO	Proposer
Amanda Rooney	AR	NESO	Observer
Andrew Larkins	AL	Sygensys	Observer
Andrew Urquhart	AU	SSE Generation	Alternate
Calum Beckwith	CB	VPI	Observer
Charles Dolan	CD	EDF Energy – Hinkley Point C	Workgroup Member
Garth Graham	GG	SSE Generation	Workgroup Member
Graeme Vincent	GV	SP Energy Networks	Alternate
Graham Lear	GL	NESO	NESO SME
Jonathan Lakey	JL	Ocean Winds	Observer
Kevin Cowan	KC	EDF (Existing Nuclear Generation)	Workgroup Member
Maria Lopez	ML	NESO	Observer
Patrick Murphy	PM	Eleclink Limited	Workgroup Member
Ross McFarlane	RMF	Northern Powergrid	Workgroup Member

Tim Ellingham	TE	RWE	Workgroup Member