

GC0182 : Metering Polarity

Workgroup 7, 07 July 2026

Online Meeting via Teams

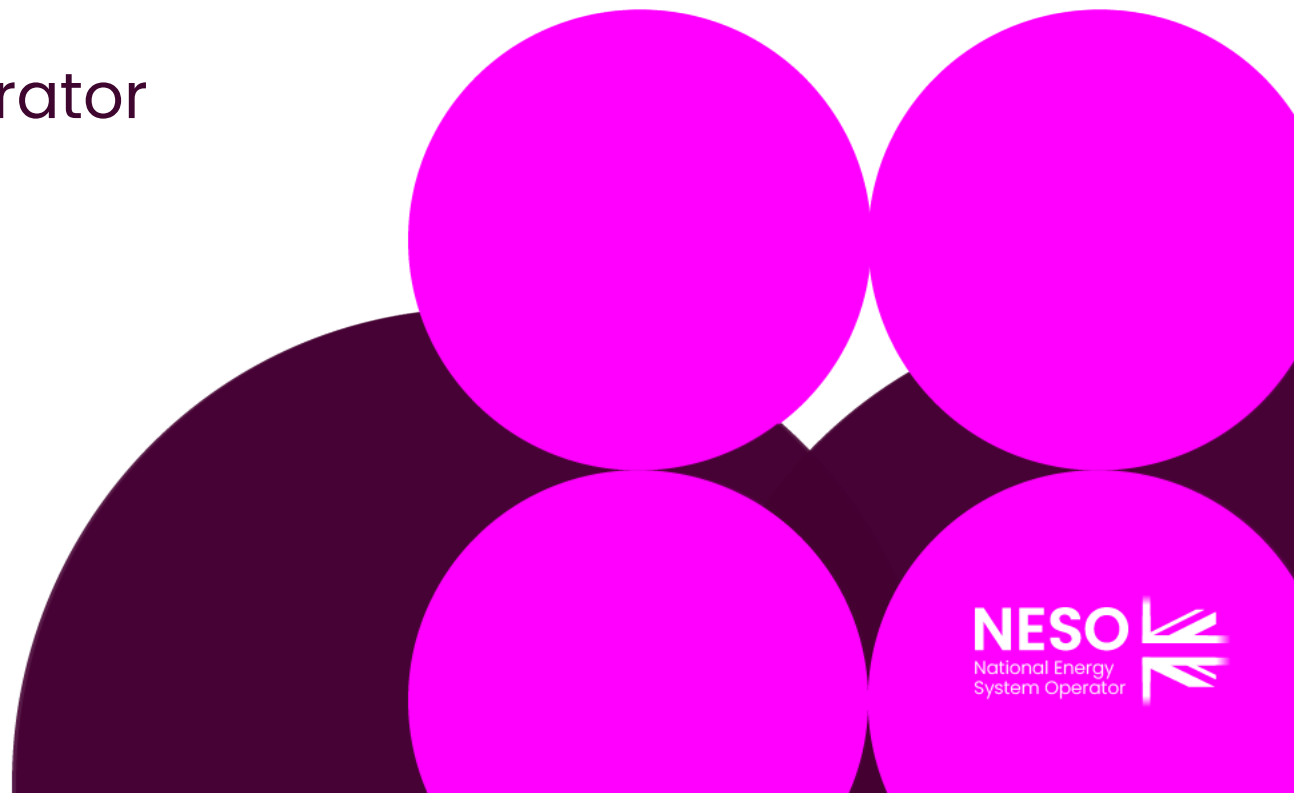
WELCOME

Agenda

Topics to be discussed	Lead
Introduction	Chair
Timeline	Chair
Workgroup Consultation Responses Review	All
NESO updates following workgroup consultation responses	Proposer
Electrical Standard Update	NESO Representative
Terms of Reference Discussion	Chair
AOB	Chair
Next Steps	Chair

Workgroup Responsibilities and Membership

Prisca Evans – NESO Code Administrator



Expectations of a Workgroup Member

Contribute to the discussion

Be respectful of each other's opinions

Language and Conduct to be consistent with the values of equality and diversity

Do not share commercially sensitive information

Be prepared – Review Papers and Reports ahead of meetings

Complete actions in a timely manner

Keep to agreed scope

Email communications to/cc'ing the .box email

Your Roles

Help refine/develop the solution(s)

Bring forward alternatives as early as possible

Vote on whether or not to proceed with requests for Alternatives

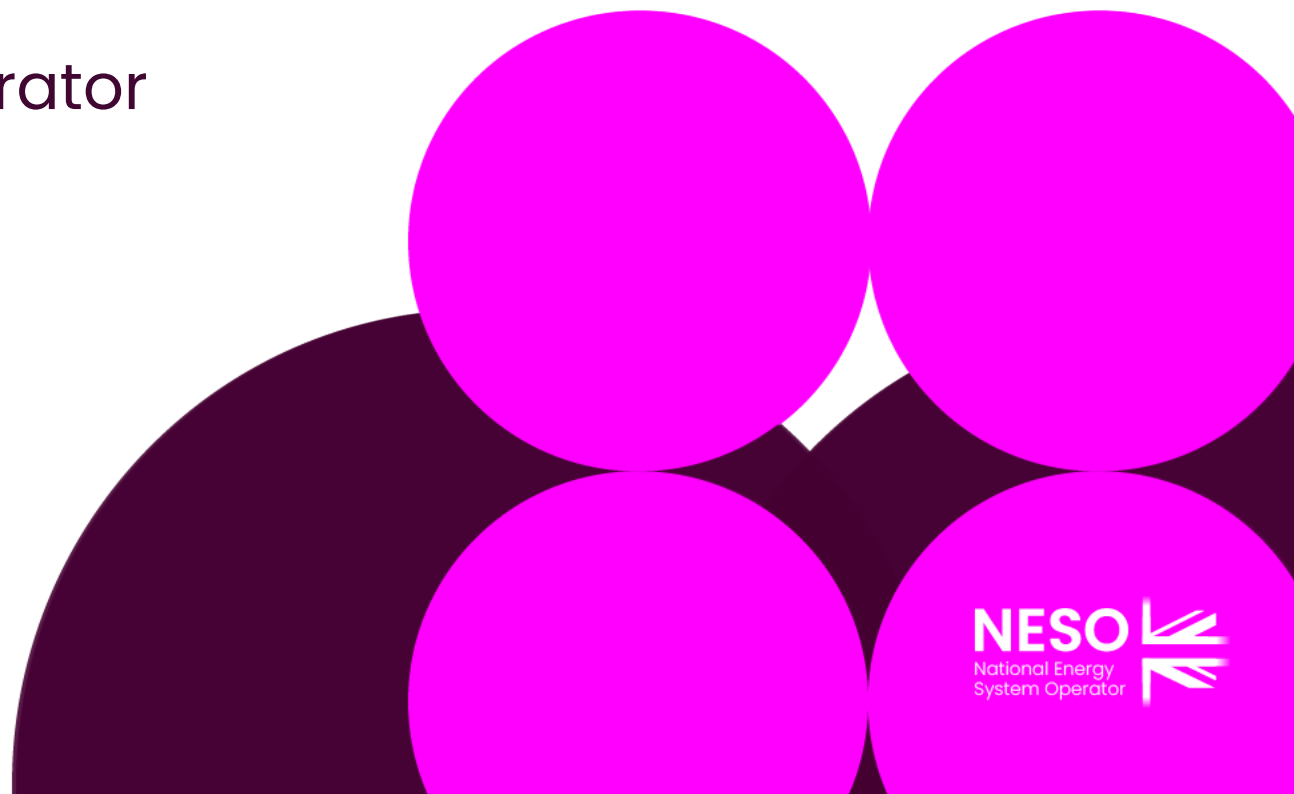
Vote on whether the solution(s) better facilitate the Code Objectives

Workgroup Membership

Role	Name	Company
Proposer	Thomas Goss	NESO
Workgroup Member	Hao Guo	NESO
Workgroup Member	Garth Graham	SSE Generation
Workgroup Member	Alan Creighton	Northern Powergrid
Workgroup Member	Andrew Allan	RWE
Workgroup Member	Harry Burns	EDF
Workgroup Member	Alan Convery	SP Transmission
Workgroup Member	Paul Youngman	Drax
Workgroup Member	Roger Carter	Transmission Investment
Observer	Rhiannon Whitty	NESO
Observer	Angie Gwozdz	NESO
Observer	Aman Sharma	NESO
Observer	Elena Fry	NESO
Observer	Rebecca Coan	NESO
Observer	Pritesh Patel	NESO
Authority Representative	Paul Drew	OFGEM

Objectives and Timeline

Prisca Evans – NESO Code Administrator



GC0182 Timeline

Milestone	Date	Milestone	Date
Modification presented to Panel	24/07/25	Code Administrator Consultation	06/10/26 - 06/11/26
Workgroup Nominations (15 business days)	29/07/25 - 18/08/25	Draft Final Modification Report (DFMR) issued to Panel (5 business days)	18/11/26
Workgroups 1, 2, 3, 4, 5 and 6	• 15/09/25 • 20/10/25 • 25/11/25 • 20/01/26 • 09/02/26 • 23/03/26	Panel undertake DFMR recommendation vote	26/11/26
Workgroup Consultation (21 business days)	13/04/26 - 12/05/26	Final Modification Report issued to Panel to check votes recorded correctly	01/12/26 - 08/12/26
Workgroups 7,8,9,and 10	• 07/07/26 • 23/07/26 • 06/08/26 • TBC	Final Modification Report issued to Ofgem	09/12/26
Workgroup report issued to Panel	24/09/26	Ofgem decision needed by	TBC
Panel sign off that Workgroup Report has met its Terms of Reference	29/09/26	Implementation Date	TBC

Workgroup Consultation Responses Review

Prisca Evans– NESO Code Administrator

Workgroup Consultation Responses Review

Q1 – Do you believe that the Original Proposal and / or any other alternatives better facilitate the Applicable Objectives versus the current baseline? (2 Respondents in total)	None	i	ii	iii	iv	v
Original		2		2	1	
Question				Yes	No	No response
Q2 – Do you support the proposed implementation approach?				2		
Q3 – Do you have any other comments?				2		
Q4 – Any alternatives?					2	
Q5 – Does the draft legal text satisfy the intent of the modification?				1		1
Q6 – Do you believe it is appropriate to include the metering polarity requirements as an Electrical Standard? If not, please state your rationale.				2		
Q7 –Do you have any specific comments on the draft Metering Polarity Electrical Standard (Annex 05)?					1	1
Q8 –Do you believe the compliance timescales of 540 days (18 months) after implementation				2		
Q9- There is a concern on signing the BCA this Standard may not actually exist and creates the potential for there to be a minor conflict between the BCA and the Grid Code concerning Generators. Do stakeholders agree that this is a reasonable low risk approach?				1	1	
Q10 – If OFGEM reject the GC0182 but NESO still have the Guidance Note published on the website, will that be a conflict to OFGEM's decision and give the industry a false impression that there is still a meter polarity standard to follow?				1	1	

Workgroup Consultation Responses Review

Key points:

1) Respondents broadly support implementation approach

- The approach is seen as pragmatic and as providing sufficient time for industry compliance.

2) Agreement that metering polarity requirements belong in formal standards

- There is alignment that these should sit within an Electrical Standard, with legal text generally considered fit for purpose.

3) Respondents do not support relying on guidance notes or connection offers to set requirements

- A clear trend is that obligations should be established through the formal code governance process, rather than informal guidance.

4) There are repeated concerns about the BCA referencing future or not-yet-effective standards

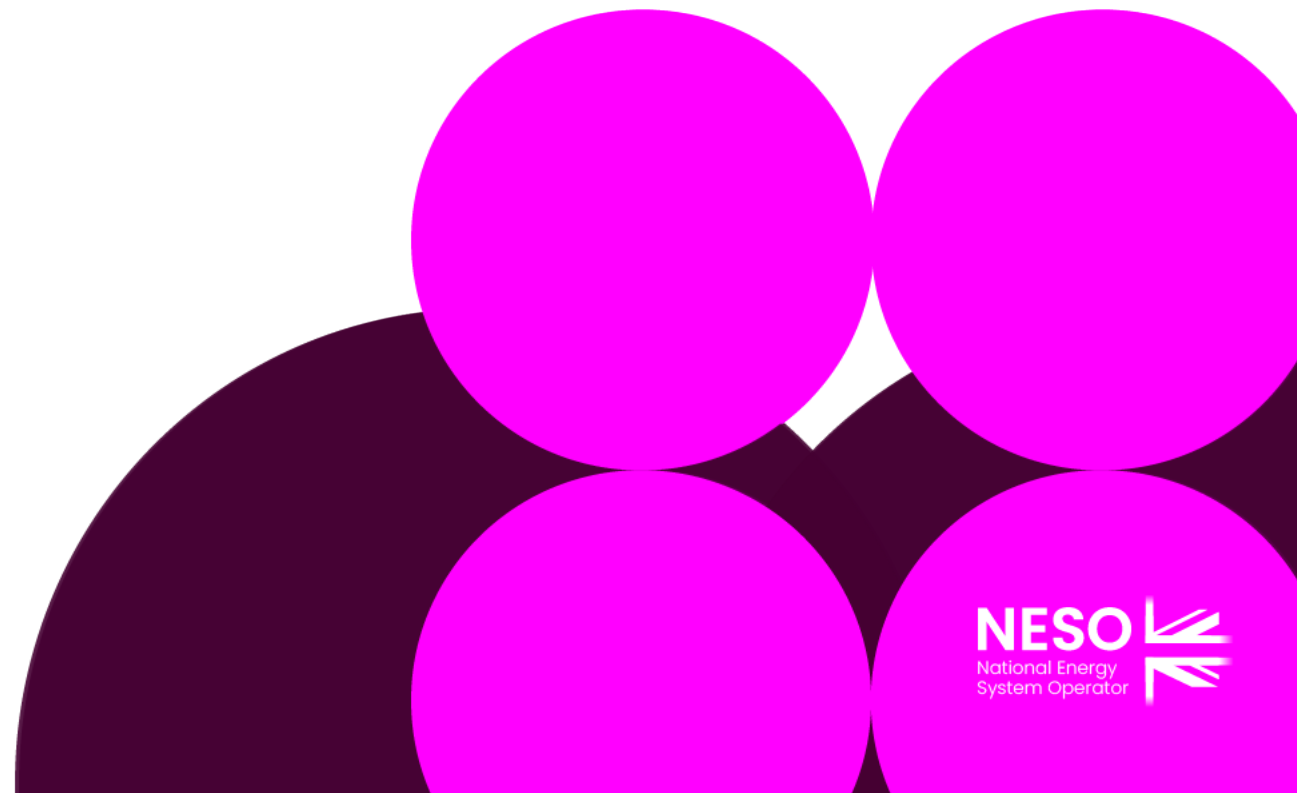
- Respondents warn this could create uncertainty, confusion over which requirements apply, and potentially unenforceable obligations at the point of signing.

5) A strong theme is the need to clearly distinguish enforceable requirements from guidance

- Respondents caution that, particularly following any Ofgem rejection, guidance must not be capable of being treated as a requirement in practice, and clearer separation is needed to avoid ambiguity and inconsistent interpretation.

NESO Updates following Workgroup Consultation

Thomas Goss – NESO Representative



Workgroup Consultation Responses Review

NESO response to consultation and resulting amendments:

Q3: Do you have other comments?

[SSE Generation]

- As a matter of good industry practice, we **do not support the use or inclusion of guidance notes within connection offers**. Guidance notes are typically subject to weaker governance arrangements and cannot be readily influenced by affected parties. This risks introducing requirements outside of the formal code governance framework. Where a requirement is necessary for compliance, this should be established through the appropriate code modification process.

[NESO] We did not include the link to, or the content of the Guidance Note directly in the BCA templates and only refer to a Guidance Note which is published on the NESO website which is not mandatory.

- Statement in BCA templates

Before approval of GC0182

Grid Code Modification GC0182 is currently underway to formalise the requirements for EU Code Users to follow a unified metering polarity convention when submitting power flow data to The Company. If GC0182 is approved by the Authority, the operational metering signals of EU Code Users being installed or upgraded after a specific date, will need to adhere to the polarity convention as requested.

A guidance note has been published on The Company website highlighting the key principles of the proposed metering polarity convention. Please note that the key principles of the metering polarity convention are not mandatory. In the event that the Authority approve Grid Code Modification GC0182, it is proposed that the metering polarity convention will be developed into an Electrical Standard which would be applicable to those parties caught by the obligations of GC0182.

Workgroup Consultation Responses Review

NESO response to consultation and resulting amendments:

Q3: Do you have other comments?

[SSE Generation]

- As a matter of good industry practice, we **do not support the use or inclusion of guidance notes within connection offers**. Guidance notes are typically subject to weaker governance arrangements and cannot be readily influenced by affected parties. This risks introducing requirements outside of the formal code governance framework. Where a requirement is necessary for compliance, this should be established through the appropriate code modification process.

[NESO] It is also stated in the Guidance Note itself that the guidance note is best practice and the principles are not enforced or mandatory.

- Statement in Guidance Note

In order to help the power flow measurement data received by NESO be consistent with the polarity convention used by the NESO SCADA system, this guidance note has been created for use when setting up new or modified operational metering equipment. The convention used in this guidance is not currently enforced, however, it describes the best practice approach and its application will be beneficial for all to ensure correct and efficient operation of the transmission network.

Grid Code modification GC0182 is currently underway to formalise the requirements for GB Code Users and EU Code Users to follow the metering polarity convention, described in this guidance note, when submitting power flow data to NESO. If GC0182 is approved by Ofgem, a new Electrical Standard will be created and implemented into the Grid Code, requiring the operational metering signals of GB Code Users and EU Code Users, being installed or modified after a specific date, to adhere to the metering polarity convention. Please note, there is currently no known date of when such a new Electrical Standard may be accepted into the Grid Code and there is no guarantee that it will be accepted. Application of this guidance is optional and aims to encourage Users to implement good practice.

Workgroup Consultation Responses Review

NESO response to consultation and resulting amendments:

Q3: Do you have other comments?

[SSE Generation]

- We also question the impact that incorrect metering polarity may have had on non-operational processes, such as the CSNP. **Have the 800 incorrect metering points been assessed and corrected for in NESO's strategic planning processes?** If not, this could materially impact the outcomes of the CSNP and SSEP and should be clarified.

[NESO] Although the issue has not been permanently resolved and incorrect values are still being provided, we have confirmed the metering points have been accounted for through a workaround in the model of NESO's iEMS where the points are reverse. In addition, there would be other tools/systems without a workaround. Latest checks indicate that the figure has dropped from 843 to 820 but this is only for identified issues and there could be more.

For future planning processes and activities such as CSNP, where there is possible interaction with historical datasets to project/forecast future data (e.g GSP demand), manual corrections have been applied where known.

Workgroup Consultation Responses Review

NESO response to consultation and resulting amendments:

Q5: Does the draft legal text satisfy the intent of the modification?

[SPEN]

- We note that the legal text places an obligation on NESO to 'validate and check' and therefore wondered **if there were an opportunity to reflect these requirements into the compliance processes for all Users**. We note that there is an **existing requirement under the European Compliance Processes in relation to compliance testing for operational metering but this only applies to Network Operators and Non-embedded customers (ECP.A.8.2) and therefore does not apply to the majority of expected connections (generation)**. We also note that **there isn't a corresponding requirement under the Compliance Process in relation to operational metering, so again will not apply across all Users**. Reflecting these requirements into the compliance process would then ensure that the polarity is checked as part of the commissioning and compliance processes and prevent future connections or modifications being made with inconsistent polarity to that expected by NESO conventions.

[NESO] NESO Compliance have confirmed that under the ONCC check list, metering checking is already carried out so it will be captured then. This modification (GC0182) reflects Operational Metering checks including meter polarity so in future the obligations are clearer. This will be applicable for new projects going forward and historic projects which undergo a Modification or upgrade.

Workgroup Consultation Responses Review

NESO response to consultation and resulting amendments:

Q9: There is a concern on signing the BCA this Standard may not actually exist and creates the potential for there to be a minor conflict between the BCA and the Grid Code concerning Generators. Do stakeholders agree that this is a reasonable low risk approach?

[SSE Generation]

- We do not consider there to be a legal conflict. While the BCA may reference the forthcoming standard, this does not create a standalone compliance obligation ahead of the Grid Code change. The Grid Code remains the governing framework and legal basis for compliance. We recognise **there may be some potential for confusion during this interim period, which underpins our concerns regarding the inclusion of such linkages within the BCA.**

[NESO] See NESO comments related to Statement in BCA Template and Guidance Note in Q3. In addition, we would note (and will be advising Ofgem on this matter as we have done with other modifications where similar issues arise (GC0156 for example)) that the Electrical Standard would only be made live when Ofgem approve GC0182 and PM0157 so changes to the electrical standard and code legal changes fit neatly together.

Workgroup Consultation Responses Review

NESO response to consultation and resulting amendments:

Q9: There is a concern on signing the BCA this Standard may not actually exist and creates the potential for there to be a minor conflict between the BCA and the Grid Code concerning Generators. Do stakeholders agree that this is a reasonable low risk approach?

[SPEN]

- We believe that this is a valid concern given that on the signing of a BCA, this effectively determines which Electrical Standards (or version thereof) apply and therefore there is potential that if the BCA includes reference to the Standard then it would not be possible for the User to comply with it or for it to be enforced. This is equally applicable to all Users and not just Generators.

[NESO] The Grid Code will supersede the BCA when code modifications come into effect, but it would be ideal to inform Users with existing connection offers of such changes. In addition, the legal text provides an 18 month window before the actual enforcement so that users who have already signed connection offers whilst waiting to complete their Plant and Apparatus can better prepare to comply with the new metering polarity requirements.

Workgroup Consultation Responses Review

NESO response to consultation and resulting amendments:

Q10: If Ofgem reject the GC0182 but NESO still have the Guidance Note published on the website, will that be a conflict to Ofgem's decision and give the industry a false impression that there is still a meter polarity standard to follow?

[SSE Generation]

- Yes. While this would not create a direct legal conflict, retaining such guidance following rejection of GC0182 risks giving the industry a false impression that a metering polarity standard remains expected. **This could blur the distinction between Ofgem's formal decision and NESO's preferred approach, creating uncertainty for stakeholders and potentially resulting in the guidance being treated as a de facto requirement despite not being approved through the formal governance process.**

[NESO] We expect the rejection and complete abandonment of GC0182 to be very unlikely as we would try to address the objection reasons from Ofgem before abandoning the modification completely.

In the case of GC0182 rejection:

The Guidance Note will still be treated as the best practice and not a legal requirement as stated by itself and the BCA templates. NESO would still like to retain some form of guidance as NESO still see it beneficial if Users choose to follow. In the meantime, we will update the statements in the Guidance Note and BCA templates to make them distinguishable compared to those before the decision is made.

– Statement in Guidance Note

In order to help the power flow measurement data received by NESO be consistent with the polarity convention used by the NESO SCADA system, this guidance note has been created for use when setting up new or modified operational metering equipment. The convention used in this guidance is not currently enforced, however, it describes the best practice approach and its application will be beneficial for all to ensure correct and efficient operation of the transmission network.

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In order to help the power flow measurement data received by NESO be consistent with the polarity convention used by the NESO SCADA system, this guidance note has been created **only for awareness and information** when setting up new or modified operational metering equipment. This guidance describes the best practice principles which are **NOT mandatory or enforced** and **application of the principles is fully optional.**

Workgroup Consultation Responses Review

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In order to help the power flow measurement data received by NESO be consistent with the polarity convention used by the NESO SCADA system, a guidance note has been published on The Company website **only for awareness and information** when setting up new or modified operational metering equipment. The convention and principles described in the guidance IS **NOT mandatory or enforced and application of this guidance is fully optional by the Users.**

Workgroup Consultation Responses Review

NESO response to consultation and resulting amendments:

Q10: If OFGEM reject the GC0182 but NESO still have the Guidance Note published on the website, will that be a conflict to OFGEM's decision and give the industry a false impression that there is still a meter polarity standard to follow?

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[NESO] The Guidance Note is only best practice and not a legal requirement as stated by itself and the BCA templates.

In the case of GC0182 approval:

- (i) If a User has a Completion Date before the Regulator's approval of GC0182, and the Connection Agreement referred to the Guidance Note, there would be no obligation to comply with it or any future standard unless that User applies for a mod or their metering equipment is subject to an upgrade on or after the date which is 540 days after implementation of GC0182.
- (ii) If a User has a Completion Date after Regulator's approval of GC0182 but before the 540 days since implementation of GC0182, the Connection Agreement could refer to the Grid Code (It may not and will depend on when the Connection Agreement is actually signed) but there would be no obligation to comply with it or any future standard unless that User applies for a mod or their metering equipment is subject to an upgrade on or after the date which is 540 days after implementation of GC0182.

Workgroup Consultation Responses Review

NESO response to consultation and resulting amendments:

Q10: If OFGEM reject the GC0182 but NESO still have the Guidance Note published on the website, will that be a conflict to OFGEM's decision and give the industry a false impression that there is still a meter polarity standard to follow?

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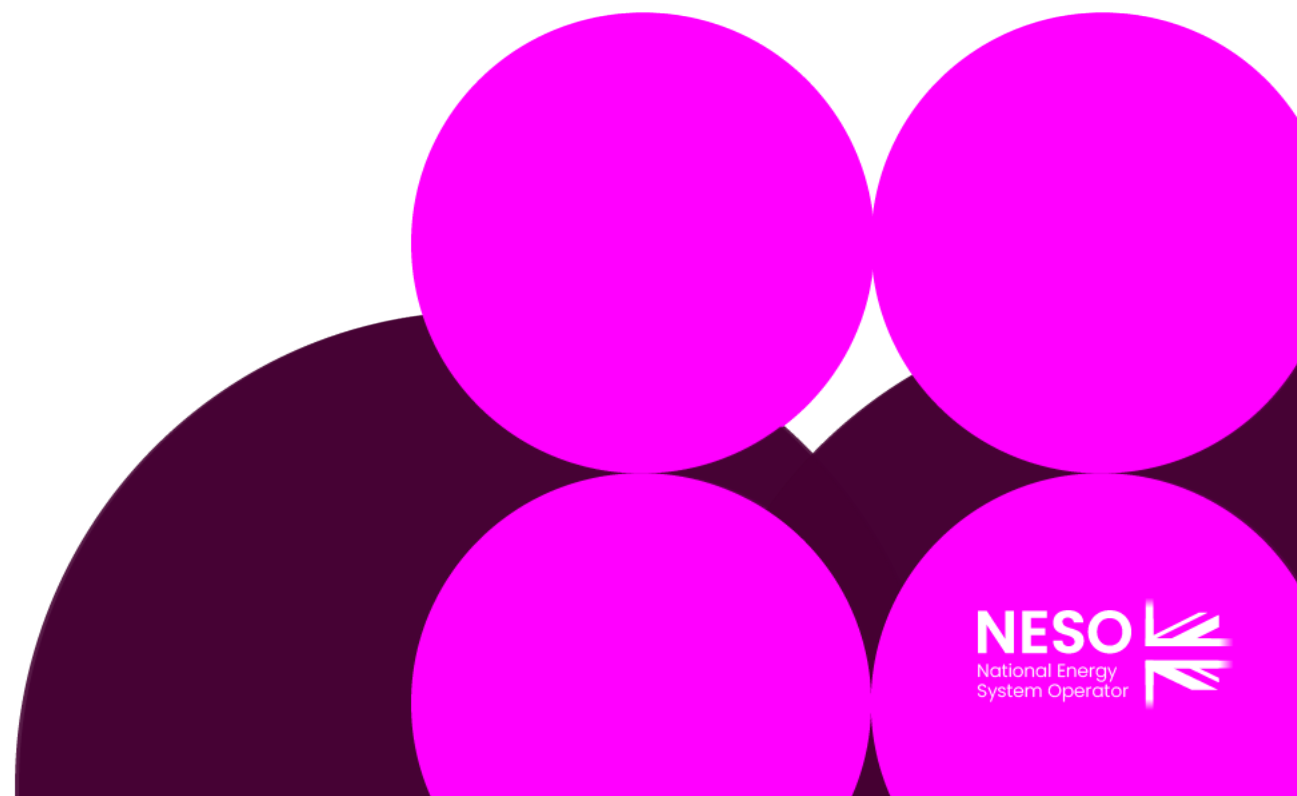
[NESO]

In the case of GC0182 approval:

(iii) If a User has a Completion Date on or after the 540 days since implementation of GC0182, the Connection Agreement could refer to the Grid Code (it may not and will depend on when the Connection Agreement is actually signed) and there is obligation to comply with it.

Consideration on Timeline for GC Mod, Electrical Standard and STC Mod

Hao Guo– NESO Representative



Timeline for GC Mod, Electrical Standard and STC Mod

NESO would like **GC0182 Mod and STCP 04-3 Mod go live at the same time** so that the metering polarity convention will be applicable to the whole industry. Thus we would like to submit both mods to OFGEM to get decision at the same time. The **Electrical Standard is expected to be approved by the GC Panel** and will be **made live the same time when OFGEM approve both mods**.

➤ GC0182 Mod

- Electrical Standard to be brought to WG to collect and address comments
- WG Vote on the GC0182 Mod proposal
- WG report and draft Electrical Standard issued to GC Panel (on **24/09/2026**)
- When GC Panel sign off WG report, it will open a 20 working days window to receive and address comments on the draft Electrical Standard

➤ STCP 04-3 Mod (PM0157)

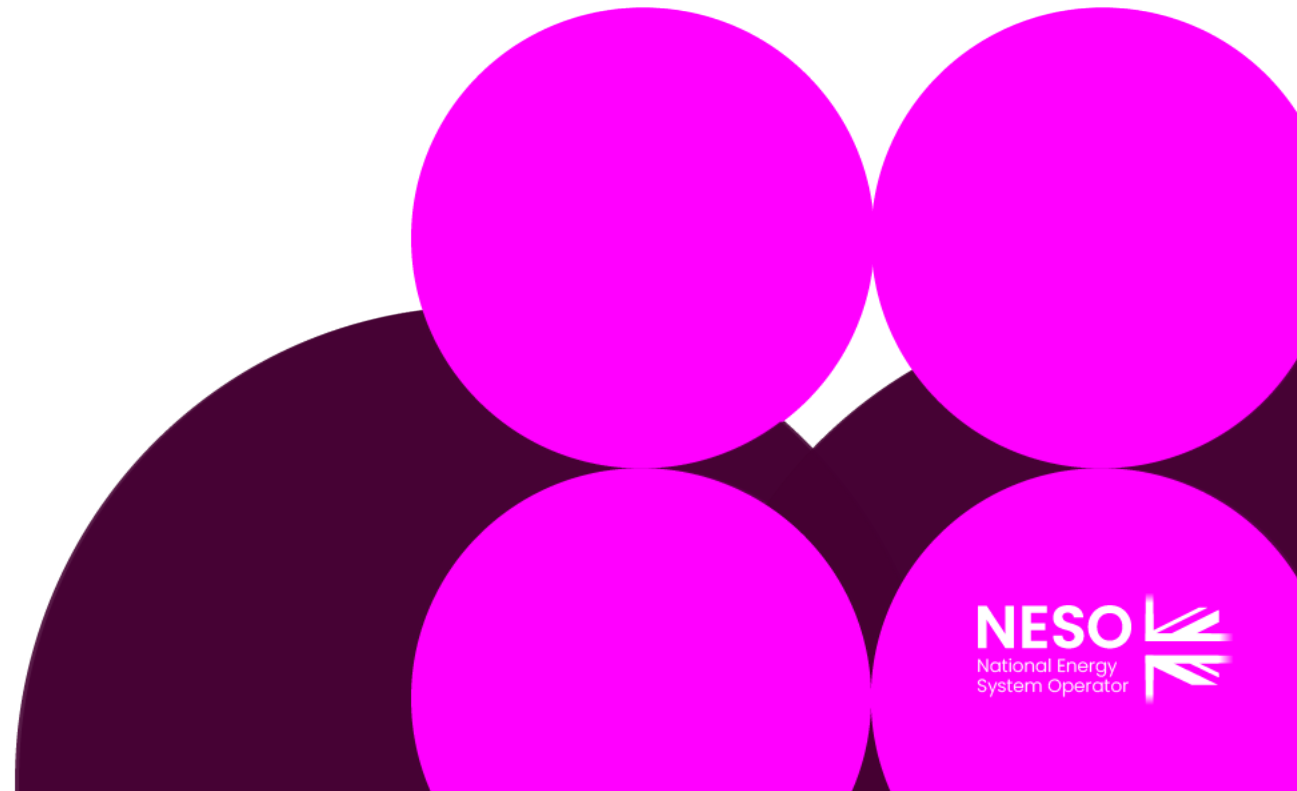
- On or after **25/09/2026**, technical content from the latest draft of Electrical Standard will be sent to the STC panel for awareness and indicate it will be subject to potential changes from the Grid Code WG and Panel
- When the GC process is mostly finalised and settled (draft electrical standard is mostly finalised on the GC panel side), submit to STC panel

➤ Mod Submission to OFGEM

- Content of Electrical Standard is approved by both GC Panel and STC Panel
- On **09/12/2026**, submit both GC0182 Mod and STCP 04-3 Mod to OFGEM
- Electrical Standard made live the same time when OFGEM approves both mods

Terms of Reference Discussion

Prisca Evans– NESO Code Administrator



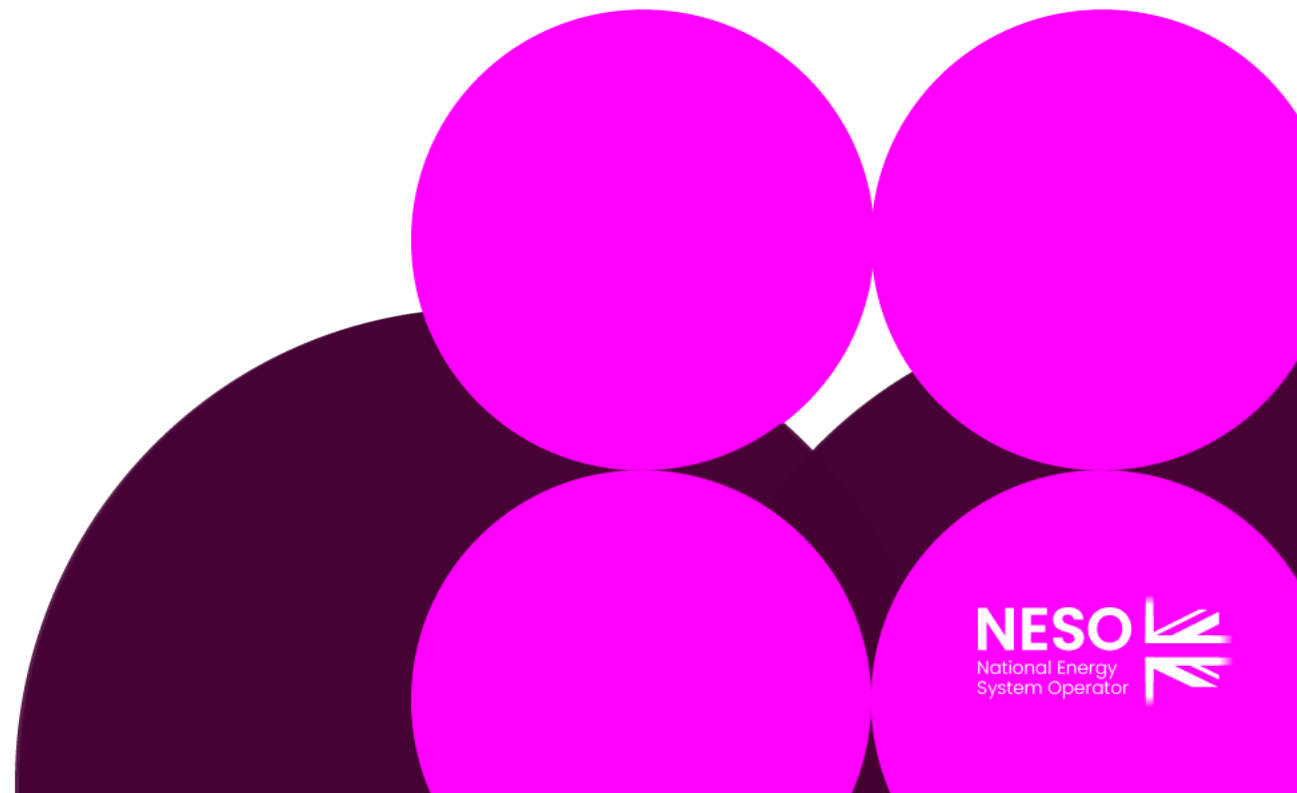
GC0182 Terms of Reference

Workgroup Terms of Reference

- | |
|--|
| a. Implementation and costs; |
| 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; |
| c. 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. Demonstrate what has been done to cover this clearly in the report; and |
| d. Consider implications to sections linked to the Regulated Sections of the Grid Code |
| e. Consider the implementation arrangements of the new electrical standard considering Grid Code and BCA obligations. Implementation and costs; |
| f. Consider the alignment of the Governance processes for the modification and the Electrical Standard; and |
| g. Consider clarity on Power Flow (Active vs Reactive). |

Any Other Business

Prisca Evans– NESO Code Administrator



Associated STC/P Mod: PM0157

We presented the proposed STCP Changes at Panel in May

Panel agreed the proposal had Materiality and was cleared to move forward to the next step and send the proposed changes to Ofgem

However, the requirement to ensure that the Electrical Standard is the same for both GC0182 and PM0157 has necessitated a pause in this process.

Once the wording and details of the Electrical Standard in GC0182 has been confirmed, we will take the final version to the STC Panel for confirmation before the Ofgem submission.

It is probable that Ofgem will pass the final approval stage back to Panel, so this part of the process is likely to be a short one

Next Steps

Prisca Evans– NESO Code Administrator

