

Public

# SQSS Panel

Tuesday, 24 March 2026

Microsoft Teams



Public

# WELCOME



# Purpose of Panel & Duties of Panel Members

## 4.2 Functions of the Panel

4.2.1 The **Panel** shall consider all reasonable requests to modify the **SQSS**. Such requests may be made by any of the **Members**, the **Authority** or any relevant interested person. **SQSS** Modification Proposals shall be raised via the **Secretary**.

4.2.2 The functions of the **Panel** shall be to:

4.2.2.1 keep the **SQSS** and its working under review;

4.2.2.2 evaluate and administrate modifications to the **SQSS** in accordance with procedures set out in the **Governance Framework**;

4.2.2.3 keep the **Governance Framework** and its working under review;

4.2.2.4 publish recommendations to modify the **SQSS** and the reasons for the recommendations;

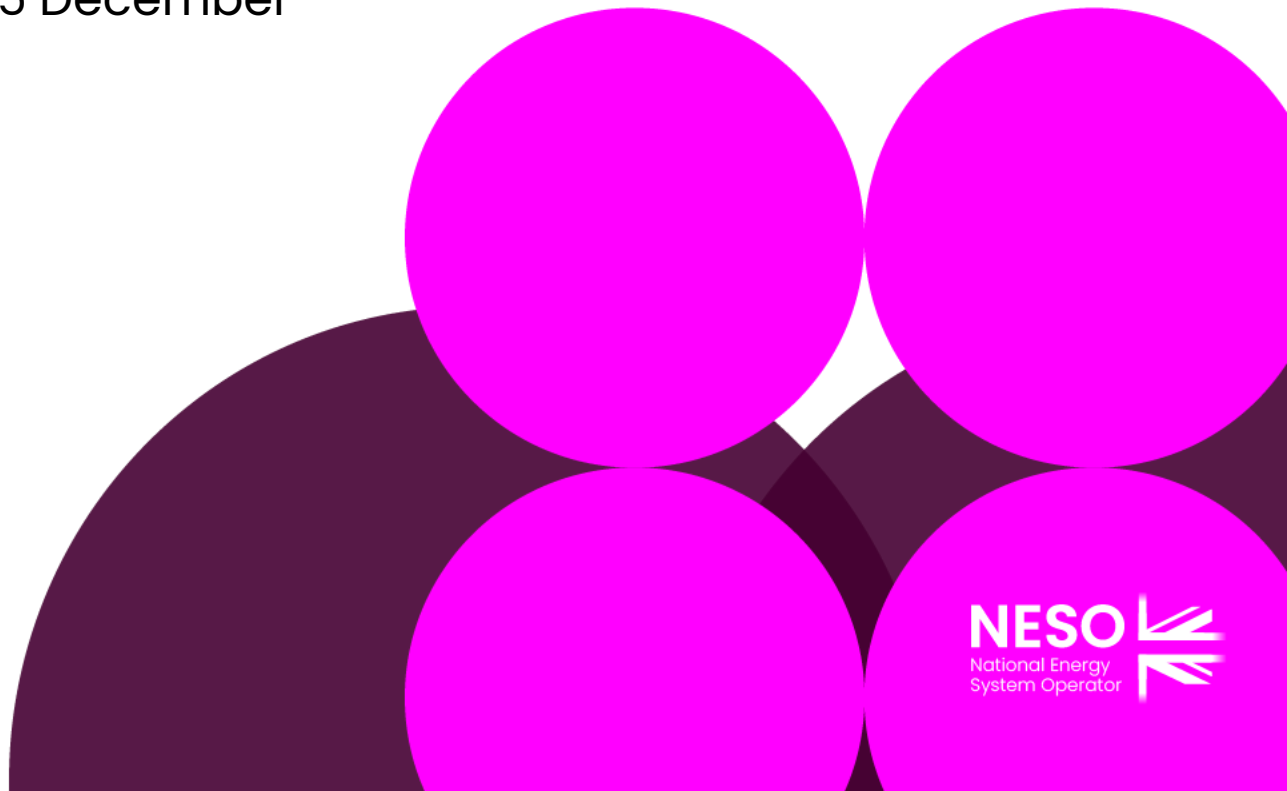
4.2.2.5 recommend to the **Authority** any modifications of the **SQSS**; and

4.2.2.6 the **Panel** shall endeavour at all times to perform its functions:

- (a) in an efficient, economical and expeditious manner, taking account of the complexity, importance and urgency of a particular modification to the **SQSS**; and
- (b) with a view to ensuring the **SQSS** facilitates achievement of its objectives.

# Approval of Panel Minutes

Approval of Minutes from the meeting held on 05 December 2025



# Action Log

Action number	Panel Raised	Owner	Action	Status
40.8	March 2024	AJ	NESO to report on progress of GC0117 and if an SQSS modification is required, when this will be raised.	Open. Pending until GC0117 solution is approved/ rejected by Ofgem
42	September 2024	PD/AG	AG to talk to Ofgem Lawyers for clarification of "Company" / Code references within licence/code. PD to confirm.	Open.
44	July 2025	PD	Review the interaction of OFTO regulations covered by the Grid Code regarding GSR030 and discuss with the Proposer.	Open
46	October 2025	PD	Provide clarity on the status of the FRCR process and its alignment with Ofgem's consultation.	Open

# Authority Decisions and Update

**Approved decisions received since last Panel Meeting**

Modification	Final Modification Report Received	Decision Date
<u>GSR034: Review of Loss of Power Infeed Risk for Offshore DC Converter</u>	16 December 2025	03 March 2026

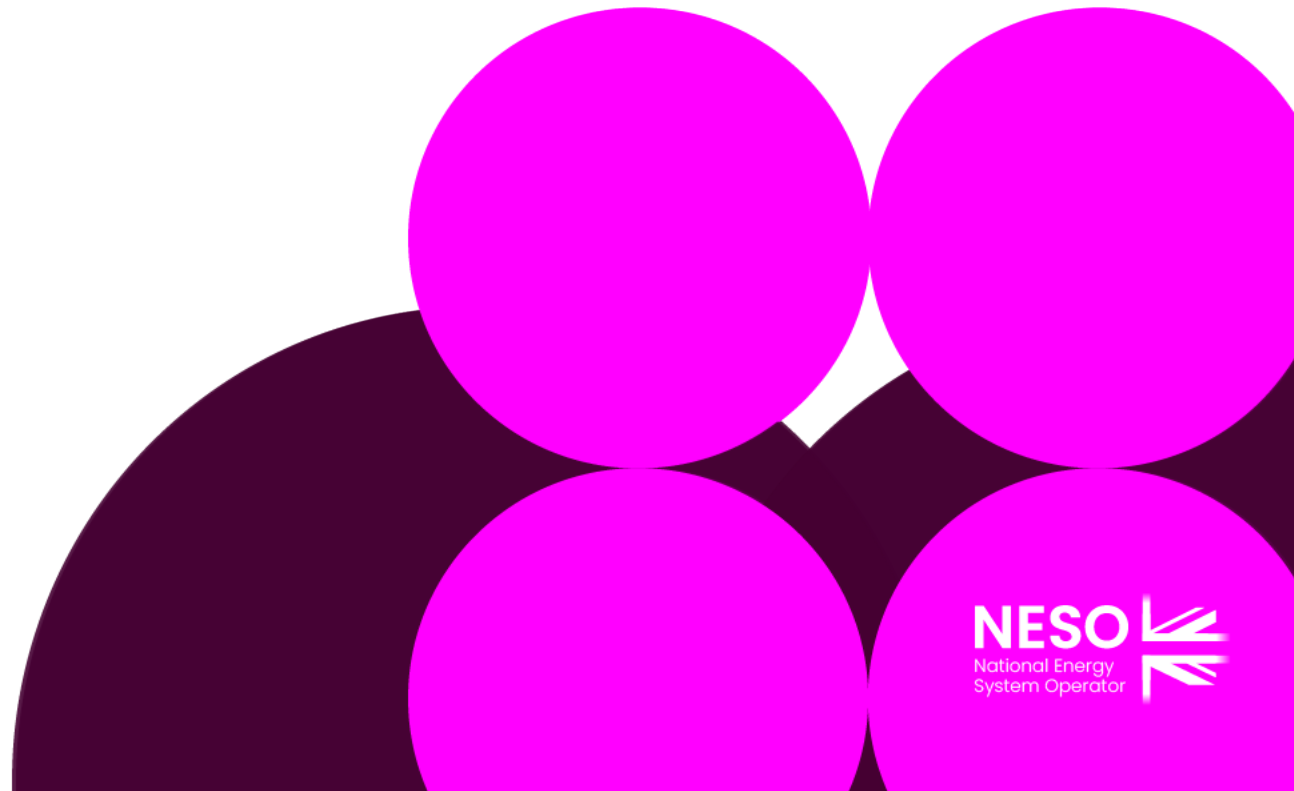
The Authority’s publication on decisions can be found on their website below:

[Energy codes | Ofgem](#)

# New Modification

GSR036: System Access Reform –  
Review of the voltage limits

Dozie Nnabuike, NESO



# GSR036 Critical Friend Feedback:

Code Administrator comments	Amendments made by the Proposer
<p>Standard formatting, typographical changes and Acronyms</p> <p>Suggested rearranging text to the applicable sections</p> <p>Amended implementation date</p> <p>Created timeline</p>	<p>Proposer re-submitted the Proposal with amendments suggested by the Code Administrator</p>



# Introduction

- **GSR036 proposes reverting the 275kV upper voltage limit from +9% to +10%**, restoring the pre-2017 SQSS position
- **The current +9% limit constrains transmission development**, slowing outage planning and network growth needed for 2030 and 2050 targets.
- **The change has a medium industry impact**, could benefit Transmission Owners, NESO, Network Operators, Interconnectors, and Generators by enabling more efficient outage scheduling, fewer rejections, and faster grid connections without compromising asset integrity.

# Impact on resilience and 275KV steady state voltage increase

- **No material impact on system resilience** is anticipated from increasing the 200–300 kV SQSS voltage limits, based on TO's consent.
- **Reverting the 275 kV upper voltage limit to 1.1pu (302.5 kV)** restores the pre-2017 SQSS position and corrects a temporary deviation introduced to align with EU standards.
- **The change is supported by Transmission Owners and NESO**, aligns with Grid Code CC.6.1.4, and reflects voltage levels already used in practice on 275 kV networks.
- **Transmission equipment is designed to withstand 1.1 pu**, with negligible impact on generation, as relevant electrical specifications already reference this capability.

[Transmission Acceleration Public Consultation | National Energy System Operator](#)

# Case Studies

- **Case studies illustrate the operational impact** of increasing the 275 kV voltage limit, using scenarios derived from NESO's Voltage Event Reports (VER).
- **No real system events have exceeded the current +9% limit at 275 kV**; all examples are based on calculated voltages from Power Network Analyser (PNA) simulations representing insecure fault conditions.
- **Voltage issues are typically identified first on the 400 kV network**, due to its stricter +5% limit, prompting operational actions before 275 kV voltage limits are reached.

# Case Study 1

- **Outage combinations in West London and South Wales led to elevated post-fault voltages**, reaching 300–301 kV at two West London substations, slightly exceeding the current +9% (300 kV) limit under lightly loaded overnight conditions.
- **Voltage control options were limited**, with an interconnector STATCOM unavailable and a Voltage Control Circuit (VCC) required to remain in service, reducing operational flexibility.
- **Operational mitigations were assessed but not viable in real time**, as the only action capable of reducing voltage within current limits introduced unacceptable additional demand (single-circuit) risk.
- **Under the proposed +10% limit (302.5 kV), the scenario would be compliant and secure**, allowing the outage to proceed without additional intervention, with demand security maintained through reinstatement of the Ealing–Laleham VCC.

# Case Study 2

- **Elevated post-fault voltages were observed in the West Midlands** following changes in wind generation output, reducing north–south power flows and increasing system voltage gain, with a worst-case voltage of **304 kV** at a key substation under low overnight demand.
- **Mitigation options were limited**, as the affected substations had restricted access to reactive compensation or controllable generation, and no tested operational actions successfully reduced voltages to within secure limits.
- **The most severe contingency was a double-circuit fault**, resulting in post-fault voltages exceeding both the current and proposed +10% operational limits.
- **The exceedance was driven by system conditions rather than asset design**, and while the +10% limit would not resolve this specific scenario, it would provide greater operational flexibility and reduce constraints for lower-magnitude voltage events.



# Case Study 3

- **High post-fault voltages were simulated in the Northwest** following a traffic-related loss of a single circuit and synchronous compensation, with regional generation unavailable due to planned outages under low overnight demand.
- **A subsequent double-circuit contingency resulted in voltage exceedances**, reaching 302 kV at the most affected substation and 301 kV at a secondary site, indicating an insecure condition under current limits.
- **The scenario represents a low-probability Mult contingency**, combining a planned outage, a fault-induced outage, and an additional double-circuit event, with post-fault voltages in the +9% to +10% range.
- **Under the proposed +10% post-fault voltage limit, all voltages would remain secure**, removing the need for a Voltage Event Report (VER) and improving security of supply and operational resilience during rare contingency events

# Case Study 4

- **Simulated overnight conditions in the Northeast of England** showed elevated post-fault voltages when key generators and reactive compensation equipment were unavailable, with a worst-case voltage of ~301 kV following a single-circuit contingency.
- **The scenario represents a medium-probability event**, combining unavailability of strategically significant generation, loss of reactive equipment, and a subsequent single-circuit fault, with voltages reaching between +9% and +10% of nominal.
- **Under the proposed +10% post-fault voltage limit**, the system would remain within secure operating thresholds, avoiding a security or compliance issue.
- **The increased limit enables reactive equipment outages** (e.g. reactors or capacitors) to be scheduled without compromising stability, reducing unnecessary operational costs and improving system flexibility.

# Conclusion

- **Transmission assets are designed to withstand 1.1pu (302.5 kV)**, consistent with Grid Code CC.6.1.4 and existing electrical specifications, which continue to reference this capability.
- **Case studies demonstrate systemwide benefits** from increasing the post-fault voltage limit to +10%, enabling more outages to proceed without breaching SQSS security criteria.
- **Operational efficiency is improved**, with fewer unnecessary interventions and Voltage Event Reports (VERs), and reduced reliance on additional generation dispatch or reactive support.
- **Overall system security and resilience remains**, as increased voltage margins improve flexibility during abnormal conditions, support demand security, and contribute to a more robust energy infrastructure.

# Questions?

## GSR036 Proposed Timeline

Milestone	Date
Modification presented to Panel	24 March 2026
Code Administrator Consultation (15 Business Days)	30 March 2026 – 22 April 2026
Draft Final Modification Report (DFMR) issued to Panel	12 May 2026
Panel undertake DFMR recommendation vote	26 May 2026
Final Modification Report issued to Panel to check votes recorded correctly	27 May 2026 – 03 June 2026
Final Modification Report issued to Ofgem	04 June 2026
Ofgem decision	TBC
Implementation Date	10 Business Days after Authority decision



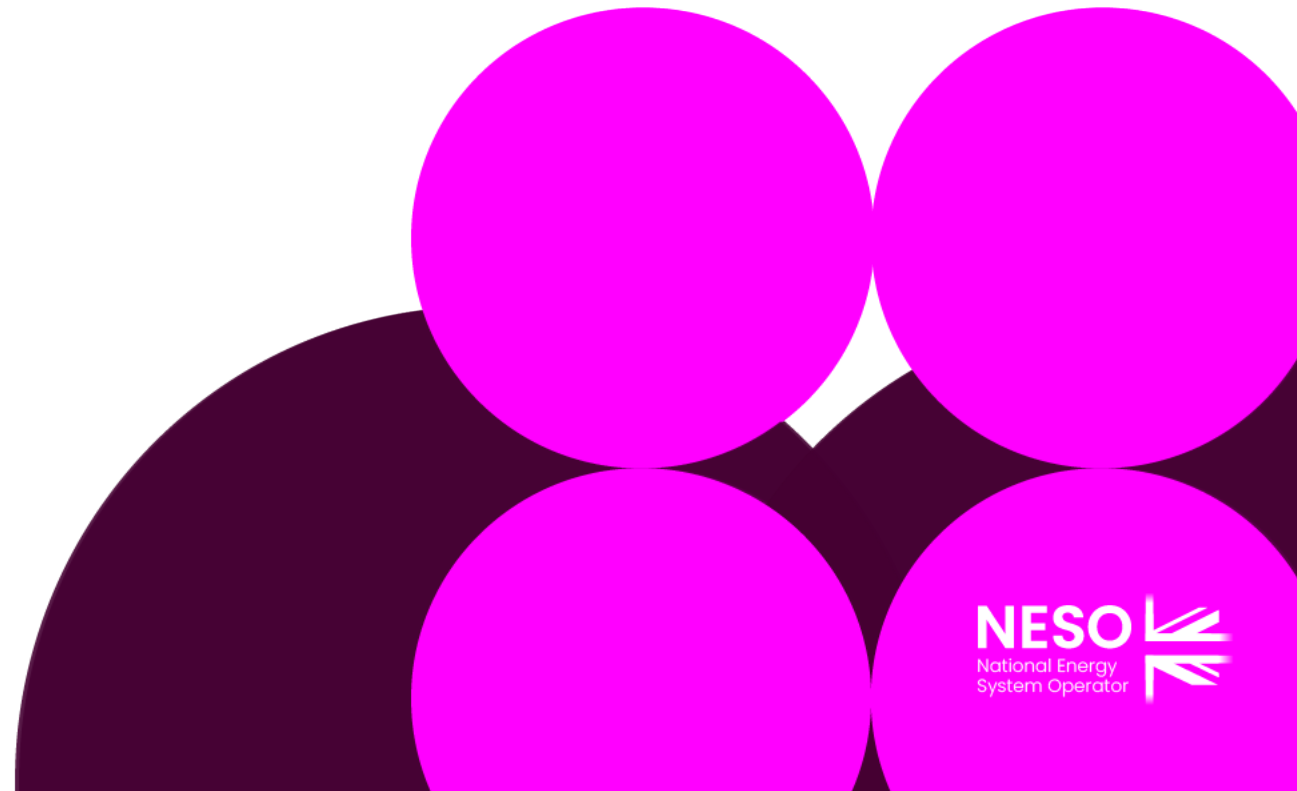
# GSR036 Asks of Panel

- **AGREE** that this Modification has a clearly defined defect and scope
- **AGREE** that this Modification should proceed to Code Administrator Consultation
- **NOTE** the proposed timeline

# New Modification

GSR037: Formatting and Housekeeping

Stuart McLarnon, NESO



# GSR037 Critical Friend Feedback:

Code Administrator comments	Amendments made by the Proposer
<p>Standard formatting, typographical changes and Acronyms</p> <p>Provided more detailed text within sections for improved clarity</p> <p>Created timeline</p>	<p>Proposer accepted all amendments made by the Code Administrator</p>

# GSR037 summary of changes

Legal Text Section	Changes made	Reason for change
<b>1.25.1/3/5 and 11. Terms and Definitions</b>	Altered all instances of <i>GSP licence</i> to <i>gas system planner licence</i>	GSP can be confused for Grid Supply Point
<b>Headers and Sub-Headers</b>	Standardised formatting between sections	Makes document easier to read
<b>2, 4, 5, 5, 7, 9, 11</b>	Altered all instances of <i>Unacceptable Sub-Synchronous Oscillations</i> to lower case	Altering to correct format
<b>4, 5, 9, Appendix H and Appendix J</b>	Altered Authority to <i>Authority</i>	Altering to correct format
<b>Table 6.3</b>	Corrected definitions to suit SQSS format	Altering to correct format

# GSR037 summary of changes

Legal Text Section	Changes made	Reason for change
<b>Table 6.5</b>	Reformatted to save space	Makes document shorter
<b>11. Terms and Definitions</b>	Remade table in dedicated table format	Makes document simpler to read
<b>Section D.5 and F.5</b>	Reformatted equations	Makes document simpler to read
<b>Figure D.1</b>	Reformatted Figure to align numbers with graph	Makes document simpler to read
<b>Section J</b>	Renumbers section to align format with other sections of SQSS	Makes document simpler to read
<b>Section J</b>	Decapitalised non-defined terms	Align formatting with other sections of SQSS



## GSR037 Proposed Timeline

Milestone	Date
Modification presented to Panel	24 March 2026
Code Administrator Consultation (15 Business Days)	27 March 2026 – 21 April 2026
Draft Final Modification Report (DFMR) issued to Panel (5 Business Days)	12 May 2026
Panel undertake DFMR recommendation vote	26 May 2026
Final Modification Report issued to Panel to check votes recorded correctly	27 May 2026 – 03 June 2026
Final Modification Report issued to Ofgem	04 June 2026
Ofgem decision	TBC
Implementation Date	10 Business Days after Authority decision

# GSR037 Asks of Panel

- **AGREE** that this Modification has a clearly defined defect and scope
- **AGREE** that this Modification should proceed to Code Administrator Consultation
- **NOTE** the proposed timeline

# Inflight Modification Updates

- GSR035: System Access Reform: Changes to Enable Beneficial Outages Without Compromising System Security – Terms of Reference update

# GSR035: System Access Reform – Changes to Enable Beneficial Outages Without Compromising System Security Terms of Reference

The Workgroup would like to reflect the following within their Terms of Reference:

Workgroup Term of Reference	
a)	Consider the governance arrangements for the risk based methodology as this need to be documented, open and transparent. The governance needs to be such that any affected stakeholder is able to influence the development and application of the methodology. The workgroup should explicitly consider whether the risk based methodology should form part of the SQSS.
b)	Clearly state the key assumptions and principles associated with the risk based methodology.
c)	Engage with all potentially affected stakeholders.
d)	Consider the rationale and benefits associated with the balance between short term increase in risk to stakeholders and the longer term benefits associated with the connection of projects associated with the transition to a low carbon economy.
e)	Consider whether a risk based methodology should be associated with outages other than those to facilitate the implementation of the Clean Power 2030 Action Plan e.g. normal maintenance and asset replacement outages.
f)	Consider whether the risk based methodology should be applied across all four seasons or just during winter, as implied by the modification proposal.
g)	Consider the most appropriate place for the methodology to be documented, so that it is open and transparent.
h)	Consider the requirement for a Grid Code modification such that there is an obligation for all relevant parties to provide the required data to undertake the risk assessment, engage in the risk assessment process, share the results from application of the methodology and agree to its findings. Consideration should be given to the process where the impacted party does not agree with the outcome of the risk assessment. The party responsible for applying the methodology should also be codified.
i)	Consider the number of occasions per annum when the new arrangements are expected to be applied and the relaxations implemented, to form a view of the potential benefits.
j)	Consider whether the risk based approach should be applied to high impact / low probability events only, or whether a risk based approach could / should be applied to low impact / high probability events.
k)	Quantify or provide examples of the change in risk to customer supplies arising from the implementation of a risk based approach compared to a deterministic approach.
l)	Consider the current risk assessment process applied in Scotland and whether it, in its current or modified form could be applied in England and Wales.

## GSR035 – the asks of Panel

27 • **AGREE** the points within Terms of Reference

# Updates on other industry codes

25 February 2026 STC [Panel Papers and Headline Report](#)

26 February 2026 Grid Code Review [Panel Papers and Headline Report](#)

27 February 2026 CUSC [Panel Papers and Headline Report](#)



## Any other business

# Activities ahead of the next Panel Meeting

Modification Proposal Deadline for November Panel	05 May 2026
Papers Day	12 May 2026
Panel Meeting	26 May 2026 Teams

# Close

Jess Rivalland  
Chair, SQSS Panel