

STC Panel

Wednesday 28 October 2026

Online Meeting via Teams

WELCOME

Approval of Panel Minutes

Approval of Panel Minutes from the meeting held on
26 August 2026 and 30 September 2026

Chair's Update

- Action Log
- Horizon Scanning

Actions

Action number	Panel raised	Action	Owner	Comments	Due by	Status
09	June 2026	Speak with the connections team to provide an update (written or verbal) on the resolution of the final sums issue and why a modification is no longer needed, ideally at the next panel meeting.	CN	29.07.26 Weekly discussions ongoing. Current preference is a non-code solution via a direct agreement, although a modification may still be required if that approach does not prove viable.	Ongoing	Open
14	August 2026	NESO to arrange further engagement with impacted parties on PM0158.	AR/KC	Ongoing engagement required.	Ongoing	Open
16	September 2026	RW to circulate the draft PM0159 legal text and proposed solution before any Ofgem decision, and additionally how modification fees, delay charges and other additional costs would be treated.	RW	Ongoing until CMP471 has decision.	Ongoing	Open

STC Panel Horizon Scanning

Expected Panel	Mod reference	Title	Proposer	Company	Type	Governance Route	Associated Mods	Description	Status
Apr-26	PM0157	Meter Polarity	Tom Goss	Neso	STCP	STCP		Draft with further updates to be presented at October Panel.	Paused
TBC	TBC	Dynamic Line Rating	TBC	NESO	STCP	STCP	None	STCP 4-4 will be looked at to make sure that upcoming Dynamic Line Rating changes are compatible with STCP	To be raised
TBC	TBC	Further connections reform mods	TBC	NESO	Not yet known	TBC	Not yet known	We are confirming the forward programme of work, and will keep STC Panel updated on future mods.	To be raised
TBC	TBC	ESRS	Tony Johnson	NESO	STC	TBC	GC0156	Consequential STC Mod to GC0156, raised in Feb 26. Sept Panel update - Grid Code modification has now reached the Workgroup Consultation stage. As a result, the consequential STC modification is moving closer to being raised	To be raised
TBC	TBC	Update to the SBN Template	Biniam Haddish	NESO	STCP			STCP 18 -1 Update to the SBN Template to facilitate efficient communication with TOs (ongoing work taking place with TOs)	To be raised
TBC	TBC	Consistency update	Maria Lopez	NESO	STCP	STCP - Not Material		STCP11-1 - aims to update minor inconsistencies STCP 11-1, Section 6.4	To be raised
TBC	TBC	CNDM 7.22-7.25 Procedure "Capacity Reallocation"	Dovydas Dyson	NESO	STCP	TBC		New STCP - Draft to come to November Panel	To be raised

Authority Decisions

- Authority Decisions
- Updates

Authority Decisions and Updates as of 20 October 2026

Decisions Pending:

Modification	Final Modification Report submitted	Expected Decision Date
CM078 : Connections Triggering Distribution Impact Assessment	07 June 2022	TBC subject to CMP328 send back
CM093 : Extending the principles of the User Commitment Methodology to Final Sums Methodology as a consequence of CUSC Modification – CMP417	16 July 2026	TBC
CM097 : Electromagnetic Transient (EMT) and Root Mean Square (RMS) Model Submission for Transmission Owners (TOs)	16 July 2026	TBC
PM0147 : RMS and EMT Model Sharing Process (STCP 12-2 Issue 01)	16 July 2026	TBC
PM0158 : Changes to TNUoS Timing Protocols	26 August 2026	TBC

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

[Energy codes | Ofgem](#)

New Modifications

PM0157 Standardisation of Power Flow Metering Polarity

Tom Goss – NESO

Power Flow Metering Polarity – Issue

- **Issue**

- “Incorrect/inconsistent” polarity for power flow metering data fed into the NESO SCADA system, for example negative instead of positive flow

- **Impact for NESO**

- **Deteriorating accuracy** in NESO management system
- **Reduced State Estimation reliability** impacting situational awareness
- **Reduced system security** and potential SQSS breach due to less effective contingency analysis
- **Additional balancing cost** incurred by less efficient output from downstream NESO balancing and forecast system

- **Impact for other stakeholders**

- **Delay in setting up metering** for new connections
- **Increased workload** due to updating and correcting metering polarity
- **Delay in NESO’s decision making** for outages and commissioning

Power Flow Metering Polarity – Current Status

No clear and unified power flow polarity standard in STC/STCP or Grid Code for power flow data sent to NESO

No clauses in STC/STCP, Grid Code, or licence obligation requesting parties to:

- follow a power flow polarity standard
 - parties may choose their own convention, which could be inconsistent with other parts of the network; or
- fix any existing polarity issues.



Power Flow Metering Polarity – Current Effort

NESO regularly audits, investigates and applies fixes for meters with incorrect polarity, but these workarounds are temporary and not sustainable

NESO tries to establish communication channels with relevant parties to investigate and resolve any issues identified.

NESO set up an internal working group aiming to seek solutions in terms of Codes, standards, policy and process. Views have been sought from stakeholders to develop this work, including onshore TOs, OFTO, Elexon and Generator.

A Grid Code Mod is already in progress: GC0182, recently voted unanimously to approve the Work Group Report and final Legal text draft, which is based on the solution developed by the aforementioned NESO working group.



Power Flow Metering Polarity – Criticality of Issue

- **As of Feb 2025, more than 800** have been identified as having incorrect polarity, which could increase if new connections do not follow the polarity standard.
 - OFTO – 416
 - TO/Generator – 402
- Potential scenarios of the **impact of incorrect polarity** that could be incurred during NESO Operation:
 - **Underestimate in requirement of system response and reserve level**
Insufficient level of response and reserve to deal with contingency for real-time operation -> system security issue and potential SQSS breach
 - **Overestimate in requirement of system response and reserve level:**
*Extra Cost = Price of MWh * Amount of Overestimate MW * duration*

Power Flow Metering Polarity – Criticality of Issue

Impact of incorrect polarity could be incurred during NESO Operation

- **Extra cost when managing constraint:**

*Extra Cost = Price of MWh to increase Generation in Area A * Amount of Incorrect MW * duration - Price of MWh to reduce Generation in Area B * Amount of Incorrect MW * duration*

e.g. Assume a constraint is broken by 500MW for 4 hours so generation in Area A is reduced by 500MW, however, due to group demand error resulting from incorrect polarity this was an oversell of 200MW. Generation in Area B had to be increased by 200MW to cover this unnecessary sell. Average cost of the sell MW was £40/MWh whilst buy MW was £120/MWh, Extra Cost = £120 * 200 * 4 - £40 * 200 * 4 = **£64k**.

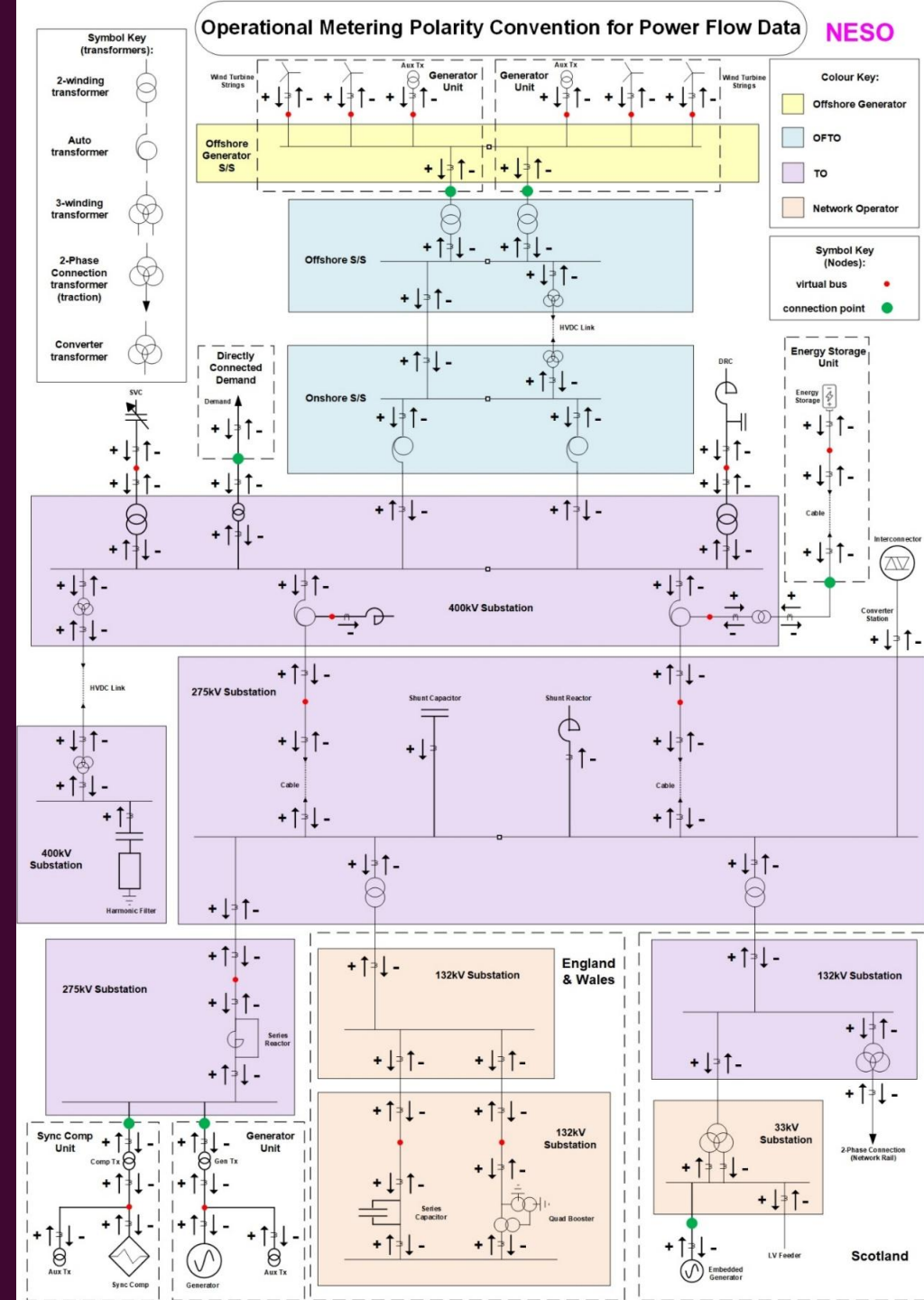
Power Flow Metering Polarity – Proposed Solution

- To develop a unified power flow polarity convention in the form of a diagram with explanatory description
- STCP 04-3 Modification and GC0182 Modification including the new Electrical Standard go live at the same time so that the proposed metering polarity convention will be applicable to the whole of industry
- To improve/modify processes between NESO and other parties so that the standard will be followed and referenced when setting up metering connections to NESO SCADA
- To ensure the polarity standard is followed during ongoing operation
- To implement for new connections as well as new meters at existing sites at this stage, effective 18 months after Ofgem's decision to confirm the changes, to give new relevant parties a grace period before the requirement to follow the new Meter Polarity conventions takes effect.



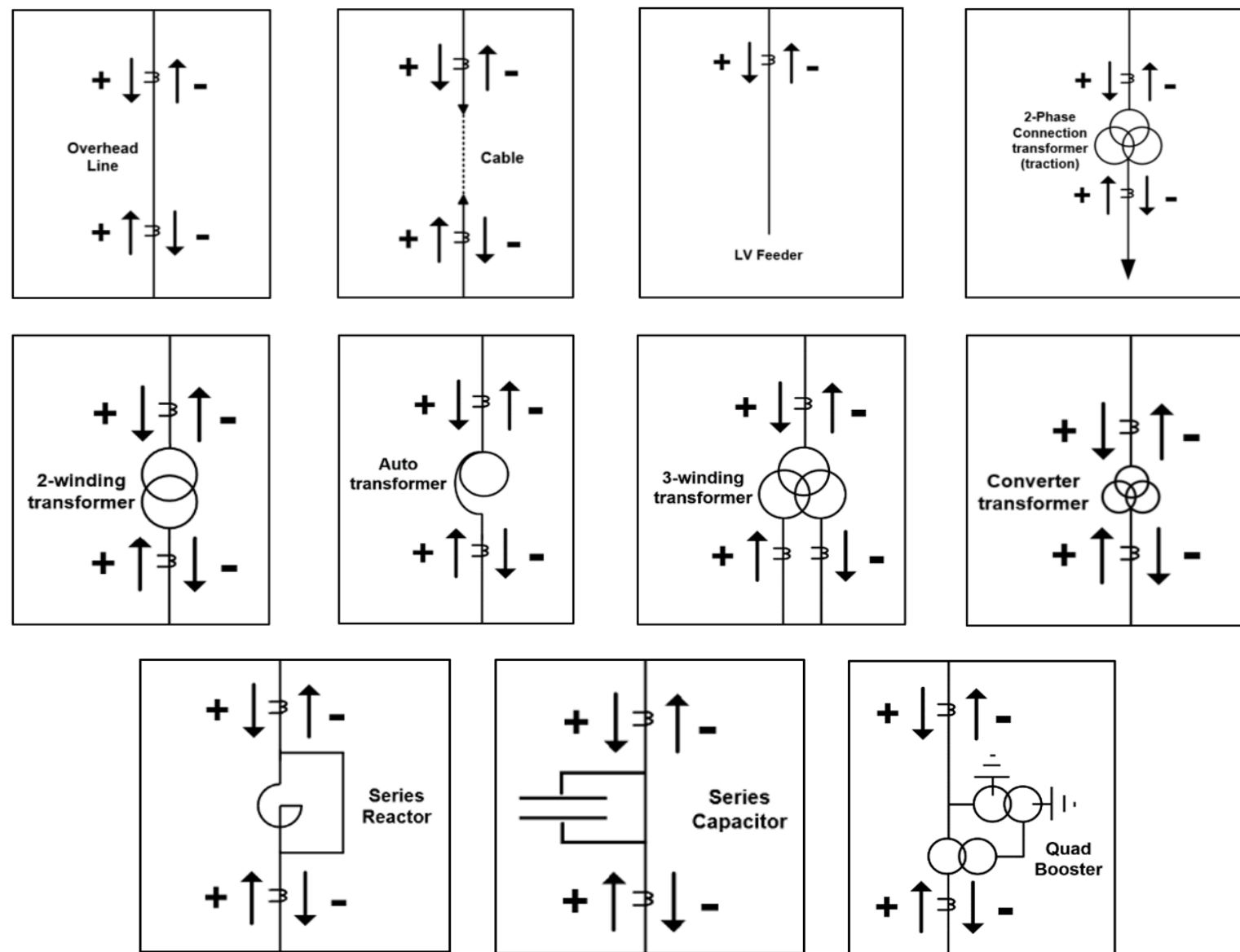
Operational Metering Polarity Convention for Power Flow Data – Provisional Diagram

STCP04-3 Appendix B5: Operational Metering Polarity Convention for Power Flow Data



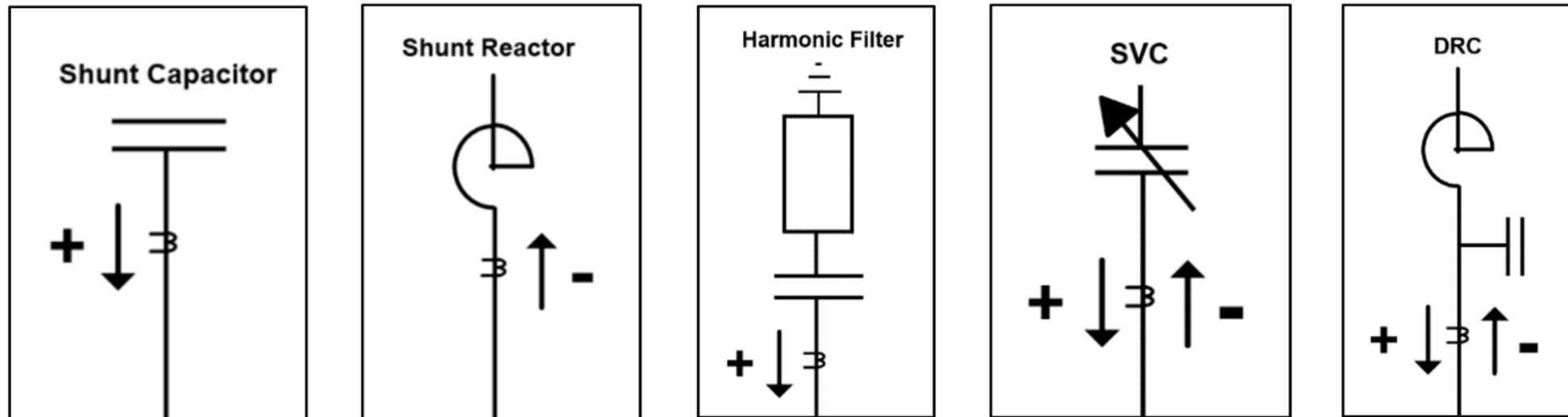
Power Flow Metering Polarity – Key Principle

- Connections between GB substations and connections within GB substations** (including series connected reactive compensation) are represented by positive flow into the device and negative flow out of the device, on both sides.



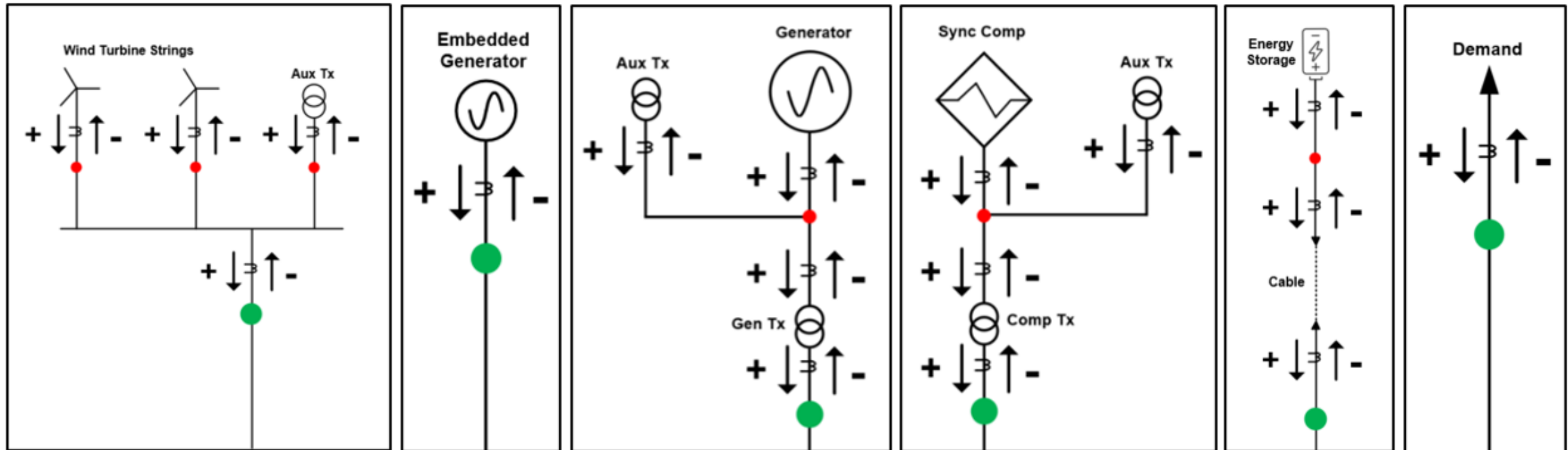
Power Flow Metering Polarity – Key Principle

- **Shunt connected reactive compensation** is positive when leaving the plant and negative when entering the plant.



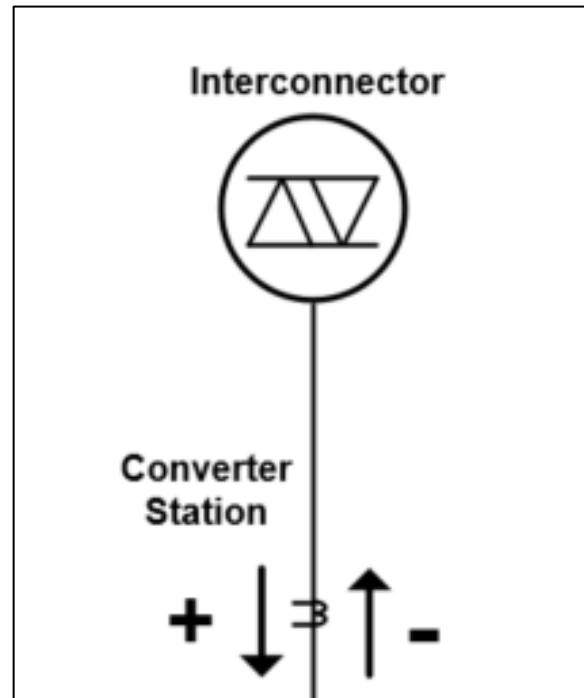
Power Flow Metering Polarity – Key Principle

- **Generator and demand connections** include all assets from the User up to the connection point. All metering associated with User connections is positive towards the connection point and negative away from the connection point.



Power Flow Metering Polarity – Key Principle

- **International Interconnectors** are positive at the converter station when power is being supplied into a GB substation and negative at the converter station when power is being supplied from a GB substation (effectively they are treated like a generator connection to the GB system).



Power Flow Metering Polarity – Key Principle

For any equipment not represented in the diagram, the convention used should be that of the category to which the equipment belongs (as mentioned above):

- Connections between GB substations and connections within GB substations (including series connected reactive compensation):
 - positive into the device and negative out of the device (on both sides)
- Shunt connected reactive compensation:
 - positive when leaving the plant and negative when entering the plant
- Generator and demand connections (including all assets from the User up to the connection point):
 - positive towards the connection point and negative away from the connection point
- International Interconnectors:
 - positive at the converter station when power is being supplied into a GB substation and negative at the converter station when power is being supplied from a GB substation (effectively they are treated like a generator connection to the GB system)

Power Flow Metering Polarity - Benefits

Improved situational awareness, system security, better forecast and reduced balancing cost

Reduce and/or mitigate iterations and delay for setting up new connections and approval for outage and commissioning

Improved coordination, efficiency and transparency between NESO and other parties following unified polarity standard and standardised process



Questions?

Code Administrator Update

- Horizon Scanning Update

Updates on other industry codes

24 September 2026 Grid Code Review [Panel Papers and Headline Report](#)

25 September CUSC [Panel Papers and Headline Report](#)

30 September 2026 STC [Panel Papers and Headline Report](#)

Any other business

None

Activities ahead of the next Panel Meeting

Modification Proposal Deadline for STC November Panel	10 November 2026
Papers Day	17 November 2026
Panel Meeting	25 November 2026

An aerial photograph of a rural landscape at sunrise. The sun is low on the horizon, casting a warm glow over fields and trees. Long shadows are cast across the fields. In the bottom right corner, there are four overlapping magenta circles. The background image is a landscape with fields, trees, and a distant city skyline under a hazy sky.

Close

Ryan Baldwin
Chair, STC Panel