

Safety Notice

Notice to all network stakeholders.

Issue 7 | Rev. 0 | June | 2025

Yorkshire Switchgear YSF6 – Operational Restrictions

What happened?

On the 29th of March 2022, a Yorkshire Switchgear Type YSF6 11 kV gas circuit-breaker (GCB) in UKPN failed disruptively resulting in fire which destroyed most of the 11 kV switchboard in the substation. Following initiation of a “Spring not charged” alarm, Field Operatives attempted to manually charge the springs. Upon slightly turning the charging handle, the spring charging motor appeared to operate. At this point, the field operatives exited the switchroom as this outcome was unexpected. The GCB failed disruptively shortly afterwards.

Investigation into the cause of the failure is being conducted by UKPN in conjunction with the switchgear manufacturer. As a result of this incident in UKPN, the immediate precautions recommended in this safety alert should be followed until the root cause of failure has been established. The incident report was sourced from EEA’s knowledge Network 18 – 2022 (UK&IRE) Yorkshire Switchgear YSF6.

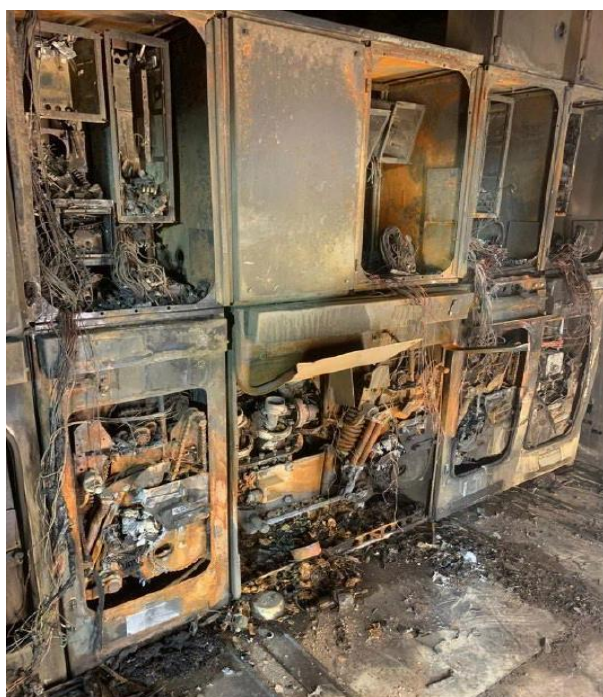


Figure 1: YSF6 11kV GCB Switchboard that failed in UKPN



Figure 2: YSF6 indoor, metal enclosed switchboard at Tatua Substation

Where are these Gas Circuit Breakers utilized in Powerco’s Network?

YSF6 switchgears are installed in **Thames** and **Tatua Substations**, respectively. Both Thames and Tatua currently have project construction works occurring at these sites. Through the Thames Zone substation Renewal construction project, a new ABB 11kv switchboard is scheduled to be commissioned by March 2026 with the Yorkshire switchgear being removed by May 2026.

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Notice to all network stakeholders. Recommendation and Actions Points:

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To ensure continued safety of all workers the following operations restrictions should be adhered to when operating Yorkshire SF6 (YSF6) Gas circuit breakers until further notice:

- Restrict access to substations and switchrooms containing Yorkshire or Schneider YSF6 switchboards to essential personnel only who hold the required competencies or are directly supervised by people with those competencies, with the time spent within the substation to be kept to the absolute minimum when the YSF6 switchboard is live.
- No operatives shall be present in a substation or switch room containing Yorkshire or Schneider YSF6 Circuit Breakers when they are being energised.
- If the spring charging motor fails to charge after an operation, no attempt shall be made to manually charge the springs with the associated busbars or circuit Live.
- For manual operated spring charging mechanisms, spring charging shall only be permitted with the GCB in the Open position. No attempt shall be made to manually charge springs with the GCB in Closed position.
- All Open and Close operations on YSF6 GCBs shall be conducted remotely using either remote control facilities or remotely on site via control panels (located in a separate room) or using an Approved umbilical device, as there is an elevated risk of failure when operated.
- Local Open and Close operations on YSF6 GCBs shall only be conducted after busbars and circuit have been made not Live. Local operations of YSF6 GCBs to apply or remove a Circuit Earth is permissible with busbars Live.

The above operation restrictions will be added to the following standards as part of the ongoing standard mitigation process:

- 220S043[306] Zone Substation Switchgear Operating Procedures – ZSG – TATUA – v1.
- 220S043[103] Zone Substation Switchgear Operating Procedures – ZSG – THAMES – v1.

Questions? Please contact techservicesupport@powerco.co.nz

Please distribute to all staff