



SOP445 SPL2 Support Insulator Failure

National Grid Electricity Transmission have issued NEDER 2025/1058/00 and DIN 2025/0025/00 reporting several catastrophic failures of support insulators on Reyrolle SPL circuit breakers.

Several common factors have been identified in each failure:

- Support insulators being manufactured by Daulton Insulators
- Sub-zero or high (35°C+) temperatures
- Manufacturing date range between 1992-94

SP Energy Networks currently have two Reyrolle SPL2 circuit breakers installed on the network, X120 at Kilmarnock South 400kV S/S & X305 at Strathaven 400kV S/S these units have Daulton Insulators that fall within the manufacturing period from 1992-94.

SP Energy Networks have taken the decision to apply an SOP ([OPSAF-16-445](#) has been issued) to mitigate any risk associated with a similar failure as experienced within NGET.

After engagement with NGET and Siemens (legacy OEM for Reyrolle) mitigation measures have been derived to consist of the following:

- RMZ of 35m at each circuit breaker to be applied when temperatures are either sub-zero and up to two hours after temperatures climb above freezing or when temperatures are above 35°C.
- Further measures are to apply the RMZ during switching operations and during lightning risk 1 periods.
- Temperature monitoring equipment to be deployed at site.

Recommendations and action points

- Mitigation measures to be implemented as per [SOP 445](#) and clear signage displayed.
- Work activities that will be affected by the RMZ zone shall be planned taking into account weather conditions likely to have an impact.
- All personnel shall follow the site RMZ requirements before entering.

