

1. SCOPE

This document details the application of SOP 443 (Applicable to Südkabel EHFV-C up to 170kV CSE's) issued by the Energy Networks Association.

2. ISSUE RECORD

This is a Reference document. The current version is held on the EN Document Library.

It is your responsibility to ensure you work to the current version.

Issue Date	Issue No.	Author	Amendment Details
16/10/2025	1	Ian Johnson	Initial issue

3. ISSUE AUTHORITY

Author	Owner	Issue Authority
Ian Johnson Lead Engineer (Cables)	Jon Ruiz de Aguirre Substations Manager	Fraser Ainslie Head of Engineering Design and Standards

4. REVIEW

This is a Reference document which has a 5-year retention period after which a reminder will be issued to review and extend retention or archive.

5. DISTRIBUTION

This document is not part of a Manual maintained by Document Control and does not have a maintained distribution list. It is published on the SP Energy Networks website.

6. CONTENTS

1. SCOPE.....	1
2. ISSUE RECORD.....	1
3. ISSUE AUTHORITY	1
4. REVIEW	1
5. DISTRIBUTION.....	1
6. CONTENTS	2
7. SOP DETAILS	3
8. SOP HEADER	4

7. SOP DETAILS

EQUIPMENT TYPE	Südkabel EHFV-C up to 170kV Cable Sealing End
ORIGINATING COMPANY	SP Energy Networks
DATE	1 st September 2025
NUMBER INSTALLED IN ENERGY NETWORKS NORTH	0
NUMBER INSTALLED IN ENERGY NETWORKS SOUTH	15
REASON	Südkabel EHFV-C up to 170kV CSE Disruptive Failure
STATUS IN INITIATING COMPANY	SP Energy Networks (SPEN) have been advised by Südkabel of a risk impacting a range of EHFV-C up to 170kV Cable Sealing Ends (CSE). SP Manweb (SPM) has five sets of these terminations (three in each set) located on two circuits: the FH route in Warrington and the Q Route at Prenton Grid substation. Südkabel have identified that items manufactured between 2020 and 2024 have a risk of disruptive failure. The notification confirms that four incidences have been reported to date. The reported failures indicate a reaction of the insulating oil resulting in a severe swelling of the stress cone, which also depends on the cable stripping diameter and the inner diameter of the stress cone used. SPEN have reviewed its ALARP Risk Assessment based on the information provided, which has deemed the risk level to staff and/or public as requiring mitigation. SPEN therefore have taken the decision to introduce a Risk Management Zone (RMZ). No staff/public are to be within a minimum distance of 50 metres around all identified cable terminations unless suitable mitigation is in place.
SPEN APPLICATION	As detailed above
ADDITIONAL INFORMATION	Nil
UPDATE	N/A
REMEDIAL ACTION	SPM to install signage communicating the RMZ to all staff/public. Protective barriers or screening to be erected to protect staff/public, where a minimum of 50 metres from the affected terminations cannot be achieved. No access is permitted at all affected locations within the RMZ without reporting to the OCC. In addition, access to third party land within an RMZ must have prior Approval from either the 132kV Field Operations Manager or SPM Duty Manager (out of hours). The investigation to determine repair options is ongoing and an update will follow in due course.

8. SOP HEADER

Field Name	Field Value	Field Size
Name (SOPXXX) *	SOP443	6
The reason for the Operational Restriction *	Südkabel EHFV-C <170kV Failure	30
Nature of the Operational Restriction *	Controlled access within 50m Risk Management Zone	50
Comments *	Protective barriers or screening to be erected to protect staff/public, where a minimum of 50 metres from the affected terminations cannot be achieved.	200
Restricted Access to Substation Flag *	Y	1
SOP Impact Code * (highlight or underline the appropriate code)	0 Temporary/Impact under assessment 1 Very minor operational/network impact 2 Moderate operational/network impact 3 Significant impact on system perf./measurable business costs 4 Inoperable without intervention 5 Inoperable – no cost effective solution/must be replaced	N/A
SOP component type * (highlight or underline the appropriate code)	01 Bushing only 02 Circuit Breaker 03 Fixed Portion only 04 Moving Portion only 05 Switch 06 RMU 07 Transformer only 08 Tap Changer only 09 Transformer & Bushing 10 Transformer & Tap Changer	N/A
Search Criteria *	Südkabel EHFV-C up to 170kV CSE Disruptive Failure, FH Route, Prenton GSP	N/A

* This denotes a Mandatory Field