

1. SCOPE

This document details the application of SOP 390 (Applicable to Areva SC3D disconnectors) issued by the Energy Networks Association.

This SOP is not applied within SPEN and this document has been created for reference.

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
May 2017	1	Alan MacGregor	Initial issue

3. ISSUE AUTHORITY

Author	Owner	Issue Authority
Alan MacGregor Lead Engineer, Substations Group	Alastair Ferguson Substations Manager	Martin Hill Head of Engineering Design and Standards Date:

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.

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7. SOP DETAILS

EQUIPMENT TYPE	Areva SC3D disconnectors
ORIGINATING COMPANY	Scottish and Southern Energy
DATE	2 July 2014
NUMBER INSTALLED IN ENERGY NETWORKS NORTH	~10
NUMBER INSTALLED IN ENERGY NETWORKS SOUTH	~10
REASON	<p>At the time of issuing the SOP in May, SSEPD had experienced two separate incidents where two phases of an Alstom Grid S3CD disconnector operated correctly with a single phase failing to operate. October 2012 – Tealing (NEDER 2012/0714/01). When the disconnector was operated remotely, two of the three phases opened correctly, the centre phase rotating arm remained closed with the disconnector indication showing open. The main contact had jammed on opening due to the bend in the bus transfer arcing contact. The cause of the bent arcing contact was due to incorrect installation. Inspection found a broken drive pin due to a missing screw inside the pin on the blocked phase. April 2013 – Beaully. When the disconnector was operated remotely two of the three phases closed correctly, the centre phase rotating arm did not fully close and remained outside the fixed contact with disconnector indication showing closed. Bus-transfer contact pressures adjusted and centre post re-aligned. Since issuing the SOP, SSEPD has experienced two further incidents.</p>
STATUS IN INITIATING COMPANY	<p>Prohibition on unattended remote operation. The Control Rooms will mark up all affected substations with this SOP and will request staff to attend site to confirm all remote disconnector operations. This restriction will remain in place until the manufacturer has identified the cause of the failure and a process for inspection of units and mitigation as appropriate.</p>
SPEN APPLICATION	<p>SOP not applied within SPEN. The models installed within SPEN are of a fixed blade type and as such are unaffected by this SOP.</p>
ADDITIONAL INFORMATION	<p>Under investigation by Alstom Grid. Switchgear Assessment Panel requested to discuss design issues directly with Alstom. Disconnector is type S3CD. Update March 2014: Tests undertaken by Alstom suggested that increased bus-transfer contract pressure could not cause the failures; although may be a contributing factor. Misalignment could cause the failures. Root cause remains unknown. Additional inspections now instigated during routine maintenance. SOP being removed where inspections confirm the disconnector alignment is satisfactory.</p>
UPDATE	<p>Update July 2014: Cause unknown. No further update will be issued.</p>
REMEDIAL ACTION	None

8. SOP HEADER

Field Name	Field Value		Field Size
Name (SOP)			61
The reason for the Operational Restriction *			30
Nature of the Operational Restriction *			50
Comments *			200
Restricted Access to Substation Flag *	Y		1
Search Criteria *			N/A