

**1. SCOPE**

This document details the application of SOP 2011/0377/00 (Applicable to GEC Alstom T&D Type FMVG CT/VTs at system voltage 33kV & 132kV) issued by the Energy Networks Association.


**2. ISSUE RECORD**

This is a **Controlled** document. The current version of **Controlled** document is held on the Energy Networks Intranet.

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

Issue Date	Issue No.	Author	Amendment Details
January 2012	1	Mark Stewart	Initial issue

**3. ISSUE AUTHORITY**

Author	Owner	Issue Authority
Name: Mark Stewart Title: Lead Engineer Technical Risk	Name: Alastair Ferguson Title: Technical Risk Manager	Name: Jeff Hunt Title: Head of Asset Management.   ..... Date: .....23 <sup>rd</sup> Jan 2012.....

**4. REVIEW**

This is a **Controlled** document and shall be reviewed as dictated by business / legislative change but at a period of no greater than five years from the last issue date.

**5. DISTRIBUTION**

This document is not part of a Manual and does not have a maintained distribution list.

**6. CONTENTS**

<b>1. SCOPE.....</b>	<b>1</b>
<b>2. ISSUE RECORD.....</b>	<b>1</b>
<b>3. ISSUE AUTHORITY .....</b>	<b>1</b>
<b>4. REVIEW .....</b>	<b>1</b>
<b>5. DISTRIBUTION.....</b>	<b>2</b>
<b>6. CONTENTS .....</b>	<b>2</b>
<b>7. SOP DETAILS .....</b>	<b>3</b>

## 7. SOP DETAILS

<b>EQUIPMENT TYPE:</b>	<b>GEC Alstom T&amp;D – FMVG – CT/VT's (33kV &amp; 132kV)</b>
<b>ORIGINATING COMPANY</b>	National Grid
<b>DATE:</b>	6 <sup>th</sup> December 2011
<b>NUMBER INSTALLED SPEN NORTH:</b>	6 (2 x 3-phase sets all 132kV)
<b>NUMBER INSTALLED SPEN SOUTH:</b>	33 (11 x 3-phase sets all 132kV)
<b>AFFECTED RANGE:</b>	All 33kV FMVG CT/VTs
<b>NUMBER AFFECTED SPEN NORTH:</b>	0
<b>NUMBER AFFECTED SPEN SOUTH:</b>	0
<b>REASON:</b>	<b>Disruptive failures of FMJL CT's &amp; FMVG CT/VT's</b> 1(i) 275kV FMJL CT at Cardiff East substation on 3/6/2009 (DIN2009/0046/00 refers) 1(ii) 400kV FMJL CT at Deeside substation on 29/6/2009 (DIN2009/0062/001 refers) 1(iii) 132kV FMJL CT at Indian Queens substation on 25/5/2010 (DIN 2010/0036/00 refers) 1(iv) 400kV FMJL CT at Connahs Quay substation (E.ON Site) on 18/7/2010 (DIN 2011/0041/00 refers) 1(v) 33kV FMVG CT/VT at Upper Boat substation on 2/6/2009
<b>STATUS IN ORIGINATING ORGANISATION:</b>	2(i) A 20m exclusion zone has been applied around all 33kV FMVG CT/VTs.  2(ii) For FMVG 132kV units oil sampling in conjunction with trip connected gas detection device, and maintained according to policy is considered to provide an effective management tool, catering for all failure modes. On this basis only items that are outside of existing maintenance and oil sampling policy will have RMHZ applied.  2(iii) Entry into any exclusion zone is restricted to essential work only.

2(iv) Evidence from Connahs Quay incident not only showed the failure characteristic differs from previous incidents but also that oil sampling conducted 12 months prior to the incident showed no indication of an impending failure. Oil sampling can no longer be considered an effective management tool for all failure modes therefore it is now necessary to apply Risk Management Hazard Zones to all 33kV FMVG CT/VTs.

**SPEN APPLICATION:**

FMVG 132kV CT/VT which are maintained in line with policy and are protected by a gas detection relay (i.e. All currently installed SP units) are not affected by this SOP.

**ADDITIONAL INFORMATION:**

**UPDATE:**

**REMEDIAL ACTION**