# General Guidance for Switchgear Containing SF₆

**Guidance: F Gas and Ozone Regulations**

**Information Sheet SCS 3: Key Obligations**

**April 2012**

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For current guidance search GOV.UK for "F Gas"
This Information Sheet provides a detailed description of the key obligations under the EU F gas Regulation for operators of switchgear containing sulphur hexafluoride (SF₆). See Information Sheet GEN 1 for a glossary of common terms related to these Regulations.

1 Which Regulations are covered by this Information Sheet?

This Information Sheet addresses the F Gas Regulation¹. This is EU Regulation 842/2006 on certain fluorinated greenhouse gases (F gases). This Regulation aims to reduce emissions of HFCs, PFCs and SF₆. Users of high voltage power transmission and distribution systems frequently use SF₆ in switchgear. The key obligations in this Regulation applied from July 2007.

In Great Britain the Fluorinated Greenhouse Gases Regulations 2009 (Statutory Instrument No 261) applied from 9th March 2009. This Statutory Instrument prescribes offences and penalties applicable to infringements of the EU F gas Regulation and lays out the current qualifications and certification requirements.

2 What Types of Equipment are covered by this Information Sheet?

This Information Sheet covers any switchgear equipment operating above 1 kV that contains SF₆.

3 Who is Responsible for Compliance?

In GB, the person having control over the switchgear containing SF₆ (the “operator”), typically a company, is likely to have responsibility. Also, any company employing personnel to undertake activities which require the recovery of SF₆ from switchgear must ensure that these personnel have the appropriate qualifications.

The EU F gas Regulation defines the operator as follows:

“Operator means the natural or legal person exercising actual power over the technical functioning of the equipment and systems covered by this Regulation”

According to guidance and interpretation from the EU issued in 2008, the “actual power over the technical functioning” of a piece of equipment or system must include the following elements:

- Free access to the system, which entails the possibility to supervise its components and their functioning, and the possibility to grant access to third parties;

¹ See Information Sheet GEN 4 for a list of relevant regulations and links to download the full text.
• The control over the day-to-day functioning/running (e.g. take the decision to switch it on or off);

• The powers (including financial power) to decide on technical modifications, modification of the quantities of F gas in the equipment, and to have checks or repairs carried out.

It can be assumed that at the earliest stage of the system's lifetime, all these powers lie with a single natural or legal person, normally the owner. If all these powers are devolved by the operator to a third party through contractual arrangements, the authority of operator and the responsibilities attached to it under EU F gas Regulation should be deemed transferred to that third party. If these powers are only partially transferred, the authority of operator should not be deemed transferred.

4 Obligations for Users of Switchgear containing SF$_6$ under the EU F Gas Regulation

The key obligations on the user under the Regulation are summarised in Table 1.

Table 1 Summary of EU F Gas Regulation Obligations

<table>
<thead>
<tr>
<th>Section</th>
<th>Obligation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Recover SF$_6$ during plant servicing and maintenance, and at end of plant life.</td>
</tr>
<tr>
<td>4.2</td>
<td>Arrange for proper recovery of any residual SF$_6$ in used refillable or non refillable containers.</td>
</tr>
<tr>
<td>4.3</td>
<td>Use appropriately qualified personnel to ensure the recycling, reclamation or destruction of SF$_6$ from switchgear.</td>
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<tr>
<td>4.4</td>
<td>Labelling of new equipment placed on the market (a manufacturers obligation)</td>
</tr>
<tr>
<td>4.5</td>
<td>Non-refillable containers shall not be used to transport SF$_6$.</td>
</tr>
</tbody>
</table>

Be able to demonstrate compliance with these Regulations for all equipment that contains SF$_6$. See good practice advice on record keeping covered in Section 4.6.

4.1 Gas recovery from SF$_6$ Switchgear


If SF$_6$ needs to be removed from switchgear containing SF$_6$ (e.g. to gain access to part of a system for maintenance or during system decommissioning at the end of life) it must be properly recovered. This recovery must be undertaken by appropriately qualified personnel. After recovery the SF$_6$ can be reused or sent for reclamation or destruction. SF$_6$ must not be vented to the atmosphere.
4.2 Gas recovery from SF₆ containers


Any residual SF₆ in a used storage cylinder must be properly recovered by appropriately qualified personnel. After recovery the SF₆ can be reused or sent for reclamation or destruction.

4.3 Use of appropriately qualified personnel


Personnel carrying out activities that require the recovery of SF₆ from switchgear must have the appropriate qualifications.

To take delivery of containers of SF₆, when carrying out the activities covered by Article 4 namely recovery, an organisation needs to employ appropriately qualified personnel.

See Information Sheet SCS 5 for further information about qualifications and taking delivery.

4.4 Labelling

Article 7.2. Applicable from April 2008 to all sizes of system.

Any new switchgear system containing SF₆ placed on the market must be fitted with a label clearly stating the type and quantity of SF₆ used and that shows that the equipment contains a high global warming potential F gas. In addition any instruction manuals that come with the product/equipment need to state that SF₆ is contained in the equipment and give its global warming potential. See Information Sheet SCS 6 for more details about labelling.

Whilst this obligation for correct labelling falls on equipment manufacturers, it is good practice for the equipment user to ensure that it is followed. Existing equipment does not need to be labelled, although it is also good practice to consider labelling all existing equipment in a similar format.

4.5 Non-refillable containers


The use of non-refillable containers for transporting or storing F gases, including SF₆, is banned.

4.6 Maintaining records

Good records are essential for the effective management of SF₆ inventories and SF₆ switchgear, although not an obligation. It is recommended that best practice asset management principles such as those in PAS55 - Asset management. Specification for
the optimised management of physical infrastructure assets are adopted for SF₆ switchgear and that the principles of ENA ER S38 – Reporting of SF₆ Banks, Emissions and Recoveries are adopted for the management of SF₆ inventories. As a minimum the following should be recorded:

- The location and identification reference of the equipment,
- The make and type of the equipment
- The quantity of SF₆ installed in each item when first commissioned,
- The quantity of SF₆ added,
- Any quantity of SF₆ recovered during servicing, maintenance and final disposal.

You should also ensure that you can demonstrate that only certified personnel are used for any activity involving the recovery of SF₆.

5 Possible Obligations Related to Non Switchgear Applications

Most obligations will relate to switchgear containing SF₆ equipment as described in this Information Sheet. Some companies may have other F gas technologies, e.g.:

Refrigeration and Air Conditioning. There are a large number of requirements for users of Refrigeration and Air Conditioning equipment containing F gases. See Information Sheet RAC 1.

HFC Fire protection. Some fire protection systems used for high value assets such as large computer systems use gaseous HFCs. See Information Sheet FP 1.

Refer to Information Sheet GEN 3 to check whether you have any other uses of F gases or any uses of ozone-depleting substances (as covered by EU Ozone Regulation).

The information in this document is intended as guidance and must not be taken as formal legal advice or as a definitive statement of the law. Ultimately only the courts can decide on legal questions and matters of legal interpretation. If you have continuing concerns you should seek legal advice from your own lawyers.