

We asked Carl Johnstone, from National Grid's Network Engineering team: How will the change in SF₆ regulation affect our customers?

The change in the regulation of SF₆ came into force in the UK in late February 2015, following the European changes from the 1 January 2015.

The law now requires more stringent ownership and auditability. These changes have motivated the operator to have more stewardship over SF₆, particularly around three main areas: recording, training and emissions reduction.



Recording

It is now the duty of the operator of the SF₆ filled asset to have records of all assets containing SF₆ and know the inventory of each compartment, as well as the amount of SF₆ being lost due to leaks.

The asset owner must follow the below steps:

- The inventory must be recorded when originally filled
- Any evacuation for access or decommissioning must be recorded
- Any top ups or refilling post maintenance must be recorded
- Any disposal or recycling must be recorded

All leakage must be recorded accurately, with repairs being done without undue delay.

- The level of delay will depend on many factors. There is no defined limits on what is undue, but will need to be robust on its reasoning upon being challenged.
- Any repairs must be checked within one month
- A repair could be the replacement of an asset, replacement of a seal or retro-external repair technique
- Each asset will be monitored on a frequent basis, with the frequency based on the combination of volume and whether automatic monitoring is fitted.
- 5kg and below – no need for monitoring if sealed and certified with a leak rate below 0.1%
- Commercial Engineering Services

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- 6kg to 22kg (non-automatic detection system fitted) - checks required every 6 months
- 6kg to 22kg (with automatic detection) - check annually
- Above 22kg (non-automatic detection fitted) - check every 3months
- Above 22kg (with automatic detection) – check every 6 months
- This means that all top ups will need to be accurately measured and that any surveys carried out must be recorded.

The majority of National Grids assets far exceed 22kgs of SF₆ and have either gauges that are checked every 3 months or newer assets have online electronic monitoring to trend and calculate any loss.

Training

There is a duty that any person handling SF₆ will need to be trained by a certified course:

- a theory course for SF₆ top ups and sampling
- a practical course for the evacuating and refilling of SF₆

Due to the scale of National Grid's SF₆ inventory we deliver an accredited course via our own training academy to perform SF₆ top ups and SF₆ quality sampling.

If you are interested in this training course and wish to have more details, please contact the Commercial Engineering Services (CES) team on +44 (0)800 783 9228 or email ces@nationalgrid.com

Emissions Reduction

National Grid is continuously developing our capability in the whole life management of SF₆ from commissioning, SF₆ handling and measurement, through to our reuse of the SF₆ and repair techniques. The changes to SF₆ regulation are not a major change to National Grid's strategy, and to meet the new regulatory requirements we continue to adopt and develop technology to enhance our capability using automated mass flow meters, SF₆ cameras for surveying, or innovating with suppliers to retrofit online monitoring to older in-service assets.

If you wish to discuss any aspect of SF₆ regulation or the services we offer in this area, please contact the Commercial Engineering Services (CES) team on +44 (0)800 783 9228 or email ces@nationalgrid.com