

Clarification of what activities that only can be carried out by certified personnel, according to EU 517/2014

The Norwegian GIS User Group (www.sf6.no) has received a lot of questions concerning which activities related to components filled with SF₆ that only can be performed by personnel certified according to EU 517/2014. EU 517/2014 is now implemented as a part of Norwegian law, see information (in Norwegian) from the Norwegian Environment Agency [here](#). The EU regulation (in English) is [here](#). The User Group has studied the law in detail, and our interpretation, performed in cooperation with the Norwegian Environment Agency, is provided below.

The regulation states that the following activities can only be performed by certified personnel:

- Installation, service, repair and maintenance of SF₆-filled electrical components, **whenever** this includes assembling or opening components, sub-components or circuits that **contain** or **shall contain** SF₆.
- Recovery (collection and storage) of SF₆ from components and sub-components.
- Decommissioning/discarding of SF₆-filled components and sub-components.

In practice this means that, among other things, the following activities can **ONLY** be performed by certified personnel:

- Work that includes intervention or opening of SF₆-filled compartments or systems that contain or shall contain SF₆.
- Filling and topping up with SF₆.
- Decommissioning/discarding of hermetically sealed SF₆-insulated medium voltage equipment, e.g., RMUs.
- Measuring of SF₆ purity/quality.
- Repair of SF₆-leakages.

The following activities are among those that can be performed by non-certified personnel:

- Switching operations with SF₆-filled switchgear.
- External maintenance of SF₆-filled switchgear, e.g., cleaning and painting.
- Externally connecting or disconnecting cables, lines, busbars or other conductors to SF₆-filled components such as switchgear, RMUs and other hermetically sealed equipment.
- Work on external operating mechanism of SF₆-filled switchgear.
- Decommissioning/discarding components already emptied for SF₆.

There are two exceptions from the requirements for use of certified personnel:

1) Persons that are attending or enrolled to a SF₆-certification course.

There is an exception for persons **attending or enrolled to a SF₆-certification course**. This exception is limited in time to 12 months **in total**. If these conditions are met, persons without certificate **can**

perform the following activities: recovery, installation, service, maintenance, repair and/or decommissioning **if and only if**:

- They are attending or enrolled to a training course for the purpose of obtaining a certificate covering the relevant activity, **and**
- Perform the activities under the supervision of a person holding a certificate covering these activities and **and**
- the supervisor is fully responsible for the correct execution of the activities.

This is specified in the implementation regulation, [EU 2015/2066](#), see article 2 (2) *Certification of natural persons*.

In practice this exception applies from when a person has received a confirmed date for the SF₆-certification course and until the person has received the certificate by mail or is informed that he/she has failed the certification test.

Please note that this is **not** a general permission to work under supervision of a certified person. Apprentices and service personnel working under supervision of a certified person, e.g., a supervisor from the equipment vendor/manufacturer, must be certified (unless they are attending or enrolled to a SF₆-certification course).

2) Persons working in the assembly lines of companies that manufacture equipment containing SF₆.

Persons working in the assembly lines of companies that manufacture equipment containing SF₆ are **not required** to hold a certificate. This is specified in the implementation regulation (EU) 2015/2066. Article 2 (3) states: " This Regulation shall not apply to any manufacturing and repairing activity undertaken at **manufacturer's sites** for electrical switchgear."

Please note that substations and other installations in the grid are **outside** the manufacturer's site, and work on these installations must be performed by certified personnel, even if the work is performed or managed by representatives for the manufacturer of the equipment.

There are **no requirements** for certification of **companies** that use SF₆ in electrical installations. Company certificates for f-gasses is only applicable for companies offering services for refrigeration plants, heat pumps and fire extinguishing systems, and not for equipment containing SF₆.