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## Policy to limit the use and emissions of greenhouse gas SF<sub>6</sub>

### Version history

Version	Comment	Reviewed by	Approved by	Valid from
1.0	Final version	Christian Jakobsson	Johan Lindehag	2016-04-12
2.0	Updates and clarifications	Kjell Oberger/ Anna-Carin Joelsson	Johan Lindehag	2021-01-21
3.0	Update due to the new F-gas Regulation	Karolina Viksten, AMO MT	Jörgen Hasselström	2025-05-16

## 1. Background

Sulfur hexafluoride (SF<sub>6</sub>) is an artificial gas which has for a longer period, in the absence of alternative solutions, been used in applications within the electricity industry, as insulation medium phase-ground, arc extinguishing medium and between phases in high-voltage switchgear (> 1 kV).

SF<sub>6</sub> is one of the most powerful greenhouse gases and has a potential for global warming (GWP<sup>1</sup>) that is 24 300 times greater than that for carbon dioxide. **EU Regulation 573/2024** sets the latest permissible dates—depending on voltage level—for the commissioning of new circuit breakers and gas-insulated switchgear (GIS) containing SF<sub>6</sub> or other gases with a GWP >1, with certain exceptions. **EU Regulation 517/2014** establishes requirements for leak checks and handling of existing installations containing SF<sub>6</sub>.

For most voltage levels, where the absolute majority of Ellevio's facilities are represented, there are today new or well-proven alternatives to SF<sub>6</sub> that have equivalent technical capacities. On the supplier side, development of high-voltage circuit breakers and switchgear for the higher voltage levels (> 72 kV) are on-going, including alternative gases or techniques. Ellevio follows this technology

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<sup>1</sup> GWP = Global Warming Potential

development to be able to use alternative equipment as soon as good quality commercial products are available on the market.

Ellevio is aware of the negative effects that SF<sub>6</sub> gas has on the atmosphere and climate, and therefore welcomes initiatives that can help to minimize emissions and use of the gas.

Ellevio's goal is to positively contribute to the climate change and reduce greenhouse gas emissions, as well as support the overall climate goals at national and international level.

## **2. Scope and responsibility**

This policy is a governing document that covers, where applicable, all of Ellevio's operations and shall be reflected in our business strategy, our management system, our cooperation with stakeholders, our procurement agreements and within our ongoing daily work. And therefore taken into account throughout the process of planning, building and maintaining power grids.

The policy is approved by Ellevio's SVP AMO and firmly established with Ellevio's management team. The policy applies to all employees and hired consultants as well as those who work on behalf of Ellevio. Each manager is responsible for implementing the policy in the day-to-day operations affected by the policy. The employees whom are concerned by the policy are responsible for taking part in and complying with the policy.

## **3. Validity and review**

This policy is reviewed and updated when necessary.

## **4. Aim**

The purpose of this policy is to define our approach regarding the use of SF<sub>6</sub> in new constructions, as well as how we work to reduce SF<sub>6</sub> emissions from existing installations.

## **5. Policy**

Ellevio's goal is to minimize the use of greenhouse gases as an insulating or arc-quenching medium in power grid components in our operations and eliminate emissions, and at the same time maintain the same high-level of reliability of the electricity supply, including the reliability of switchgear apparatuses.

Ellevio will actively follow the development and constantly expand the competence within the alternatives to SF<sub>6</sub>. We shall ensure that our contractors

have the appropriate competence and methods for handling and recycling/reuse of SF<sub>6</sub>.

**New investments in the electricity grid:** The use of SF<sub>6</sub> in new facilities must, as much as possible, be limited. Ellevio has developed criteria's regarding the use of SF<sub>6</sub> in new investments and expansion of the electricity grid, taking into account the ongoing technological development. These criteria's are periodically reviewed. Firsthand, Ellevio will build/renew electrical installations with equipment that does not contain SF<sub>6</sub> as an insulation or arc extinguishing medium. In cases where SF<sub>6</sub>-insulated equipment cannot be avoided, the use must be strongly motivated from a technical point of view (also taking into account the guaranty regarding electricity delivery), as well as from an environmental, economic and safety perspective. In relation to new investments where SF<sub>6</sub> cannot be avoided, an analysis regarding sustainability is presented together with the decision about investment, which takes these sustainability aspects into account.

The alternatives to SF<sub>6</sub> shall be given an advantage, where competing products with comparable performance can be offered, when Ellevio is procuring new devices. This is to accelerate the development of alternative solutions for SF<sub>6</sub> and to ensure that competition, for such products, can be achieved within the supplier market.

**Operation and maintenance regarding electricity network:** Ellevio has established specific instructions and goals for the operation and maintenance regarding existing facilities that contains SF<sub>6</sub> with the aim of minimizing emissions.

**Work with SF<sub>6</sub>:** All personnel that work at SF<sub>6</sub> -gas plants must have completed the right training and hold a license, as well as have the knowledge of plant-specific requirements for self-inspection in accordance with current instructions.

## 6. Reporting and follow-up

Ellevio has established and also follows established structures for reporting and follow-up, based on internal and external requirements, in accordance with existing instructions and routines.