

Ellevio process and team
Sustainability

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Policy to limit the use and emissions of greenhouse gas SF₆

Versions

Version	Date	Author	Comment	Reviewed by
1.0	2016-04-12	Christian Jakobsson	Final version	Rigmor Anshelm
2.0	2021-01-21	Kjell Oberger/ Anna-Carin Joelsson	Updates and clarifications	Jörgen Hasselström

1. Introduction

Sulfur hexafluoride (SF₆) is an artificial gas which has for a longer period, in the absence of alternative solutions, been used in applications within the electricity industry, for example as insulation medium phase-ground, arc extinguishing medium and between phases in high-voltage switchgear (> 1 kV).

SF₆ is one of the most powerful greenhouse gases and has a potential for global warming that is about 24,000 times greater than that for carbon dioxide. However, SF₆ equipment can be used in accordance with EU directives for transmission and distribution equipment in electricity networks when it is well motivated.

For lower voltage levels, where the absolute majority of Ellevio's facilities are represented, there are alternatives today to SF₆ that have similar technical capacities but with a significantly better environmental performance. On the supplier side, development of high-voltage circuit breakers and switchgear for the higher voltage levels (> 36 kV) are in progress, including alternative constructions, gases or with a significantly lower amount of SF₆. Ellevio follows this technology development to be able to use alternative equipment when good quality commercial products are available on the market.

Ellevio is aware of the negative effects that SF₆ gas has on the atmosphere 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. Throughout this work, we support the UN's global sustainability goal "Sustainable energy for all" (goal 7).

2. Aim

The aim of this policy is to define and establish Ellevio's approach and ambition in relation to the use of SF₆ and how Ellevio will work to reduce the use and negative impact on the climate in conjunction with the use of SF₆.

3. Scope and responsibility

This policy is a governing document that covers, where applicable, all of Ellevio's operations and shall reflect on Ellevio's organization and in our business strategy, environmental management system, work-environment, our cooperation with stakeholders 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 CEO 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.

This policy is reviewed annually and updated when necessary.

4. Policy

Ellevio's goal is to minimize the use of greenhouse gases in our operations, 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 SF₆ and also methods for handling and recycling/reuse of SF₆.

New investments in the electricity grid: The use of SF₆ in new facilities must, as much as possible, be limited. Ellevio has developed criteria's regarding the use of SF₆ 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 SF₆ as an insulation or arc extinguishing medium. In cases where SF₆-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 SF₆ cannot be avoided, a specific analysis regarding sustainability is presented together with the decision about investment, which takes these sustainability aspects into account.

The alternatives to SF₆ are 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 SF₆ 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 SF₆ with the aim of minimizing emissions.

Work with SF₆: All personnel that work at SF₆ -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.

5. 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.