

Siemens on EU Commission plans

Sustainability - the only way for a better future: the planned new F-gas regulation supports our vision

- **Reliable future-proof medium-voltage switchgears don't require F-gases**
- **Several thousand solutions already in service, combining Clean Air as insulation medium with proven vacuum-interrupter switching technology**
- **Customers benefits: same functionality, same footprint, cost-effectiveness over the entire life cycle, and lower environmental impact**

On 5th of April 2022, the European Commission has released a legislative proposal to update the 2014 F-gas Regulation in order to more tightly control fluorinated greenhouse gases (F-gases). Sulfur hexafluoride (SF6) is one of these gases. It has been used for more than 35 years in electricity transmission and distribution equipment as a switching and insulating gas. However, SF6 is the most potent greenhouse gas, with a warming potential 25,200 times higher than carbon dioxide (CO₂) and an atmospheric residence of up to 3,200 years. Siemens welcomes the Commission's proposal. As one of the leading manufacturers Siemens has already developed F-gas-free alternatives, using Clean Air (natural origin gases) for gas-insulated switchgears. While also using proven vacuum switching technology, it's possible to replace SF6 as an insulating and switching gas with a completely fluorinate free gas, thus avoiding any possible impact on environment and health.

“At Siemens, we are already able to provide SF6-free gas insulated switchgears (GIS) up to 24 kV without the use of fluorinated gases, while not having to compromise on safety, availability, lifecycle costs, and size,” said Stephan May,

CEO of the Electrification & Automation Business Unit at Siemens Smart Infrastructure. “The only sensible solution to replace SF6 in medium-voltage switchgears, is the use of natural-origin components of the ambient air. As the average lifetime expectancy of these electrical products is in the range of 35 years, changing directly to Clean Air is the most future-proof solution to comply with all possible upcoming environmental regulations.

Siemens’ environment and climate-friendly gas-insulated switchgears (GIS), branded “blue GIS”, are fully replacing SF6 with an insulating gas containing gases of natural origin (Clean Air). Clean Air consists of natural components of the ambient air and is therefore not only free of F-gases, but also harmless, extremely stable, non-toxic, non-flammable, and suitable for all operating temperatures. It has a global warming potential (GWP) < 1 and can be released into the atmosphere at the end of its lifespan.

The ecological footprint of “blue GIS” products is lower than that of comparable conventional products. These new GIS designs meet the same high expectations of public and private grid operators for gas-insulated high-tech switchgears, as with current SF6 technology today. This applies particularly to functionality, personnel safety, health and environmental protection, long service life, maintenance-free operation, compact size, durability, recyclability, and cost-effectiveness over the entire lifecycle. According to the F-gas regulation draft, training, and reporting obligations with our “blue GIS” are obsolete.

The Siemens “blue portfolio” already includes F-gas-free solutions for the 12 kV and 24 kV voltage levels. Siemens has solutions in service for both primary and secondary 12 kV gas-insulated systems, while the first 24 kV solutions are already deployed, and 40.5 kV versions are going to be introduced accordingly. In total, several thousand solutions are in the field.

The “blue portfolio” makes it possible to modernize and expand existing power grids at the highest levels of safety and simultaneously reduces the ecological footprint without compromising on performance or economic feasibility.

As the first existing SF6 switchgears are approaching end of life, Siemens will support its customers as a reliable partner during the decommissioning and replacement, along with a proven disposal process and related services.

According to the EU Commission, at EU level, F-gases currently account for 2.5% of total greenhouse gas emissions. The strengthened F-gas proposal is intended to save the equivalent of 40 million tons of CO₂ emissions by 2030, beyond the expected reduction under current legislation, reaching total additional savings equivalent to 310 million tons of CO₂ by 2050.

This press release is available at <https://sie.ag/3rLvlof>

For more information about Siemens Smart Infrastructure, see www.siemens.com/smart-infrastructure

For more information about our blue GIS medium-voltage switchgear, see www.siemens.com/bluegis

For more information on the F-gas regulation proposal, see https://ec.europa.eu/clima/system/files/2022-04/f-gases_proposal_en.pdf

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In fiscal 2021, which ended on September 30, 2021, the Siemens Group generated revenue of €62.3 billion and net income of €6.7 billion. As of September 30, 2021, the company had around 303,000 employees worldwide. Further information is available on the Internet at www.siemens.com.

Siemens Smart Infrastructure (SI) is shaping the market for intelligent, adaptive infrastructure for today and the future. It addresses the pressing challenges of urbanization and climate change by connecting energy systems, buildings and industries. SI provides customers with a comprehensive end-to-end portfolio from a single source – with products, systems, solutions and services from the point of power generation all the way to consumption. With an increasingly digitalized ecosystem, it helps customers thrive and communities progress while contributing toward protecting the planet. Siemens Smart Infrastructure has its global headquarters in Zug, Switzerland. As of September 30, 2021, the business had around 70,400 employees worldwide.