

Management of SF₆

B3 PS 2 – Question 2.2

Much development has taken place to reduce SF₆ impact on the environment from utility application for electrical insulating and interrupting equipment.
What are likely to be the enduring initiatives to prevent SF₆ gas leaks and find a possible alternative to SF₆ for GIS applications?

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B3 - Management of SF₆ – Prevention of emission for installed basis

Cigre information: TB 276 - SF₆ Handling Guide; TB 430 - SF₆ Gas Tightness Guide

Ongoing JWG B3/A3.59 - Guidelines for SF₆ end-of-life treatment of T&D equipment > 1 kV

Best practices / Recommendations to prevent gas emissions:

- Maintenance of T&D equipment in accordance with the manufacturer recommendation
- Trained and certified personal & appropriate gas handling equipment as well as processes
- Early detection (continuous gas monitoring, trend analyses) and immediate repair of leaks
- Condition based asset management including i) asset modernisation (e.g. Retrofit from central to decentralised gas monitoring, LPIT) and/or ii) replacement with new equipment

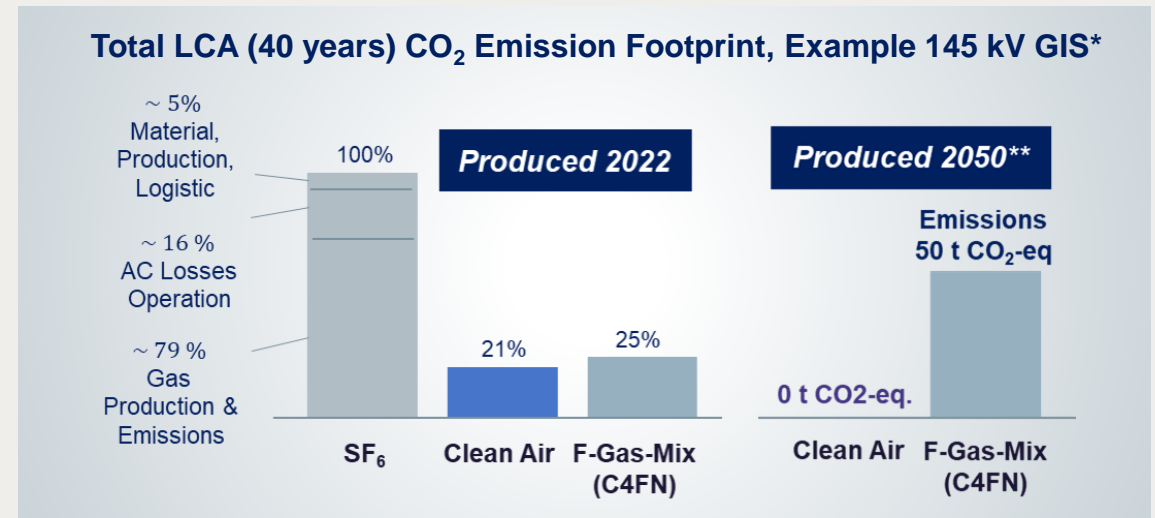
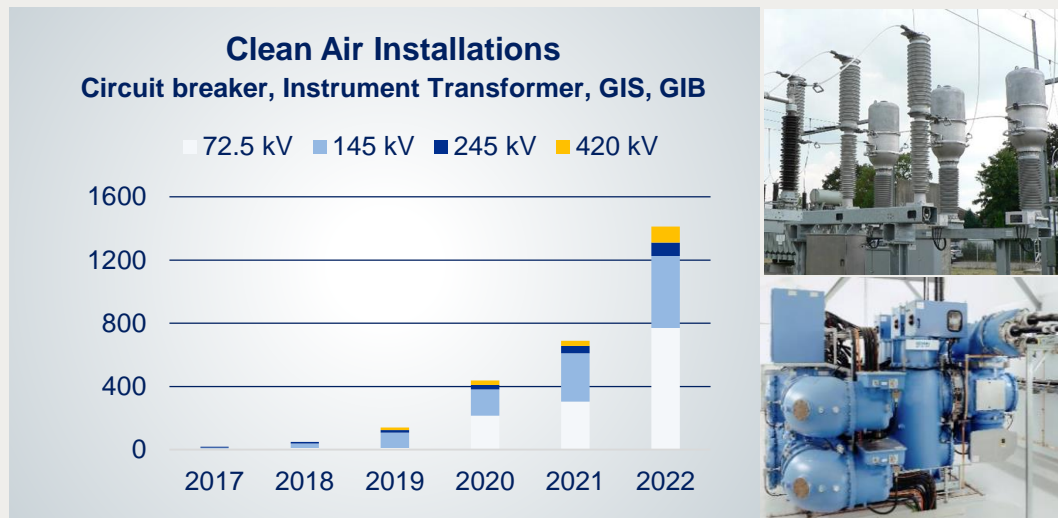
➡ **SF₆ emission can be minimized by proper treatment, but can't be reduced to zero**

➡ **Zero CO₂ emissions can only be reached with new equipment and GWP = 0 gas**

B3 - Management of SF₆ – Zero CO₂ emission with new equipment

Cigre information: TB 589 - Vacuum switching at transmission, TB 730 - Dry air, N₂, CO₂, SF₆/N₂ mixtures; TB 802 - Application & TB 849 - Electric performance of Non-SF₆ gases; TB 851 - SF₆-free current interruption; Ongoing JWG B3/A3.60 - User guide for non-SF₆ gases and gas mixtures in substations

F-gas-free products with GWP = 0 in line with the GWP > 10 prohibition proposal in EU



➔ **Zero CO₂ emission enable climate neutral power grids without CO₂ compensation!**