Paris Session 2022

Setting ambitious climate strategies in the energy sector

POWER SYSTEM ENVIRONMENTAL PERFORMANCE SC C3 - PS1

Question 1.16: According to the papers, the most important scope 1 emissions for transmission system operators are linked with SF_6. This gas being a very potent GHG contributor measures are taken to limit leakages in the atmosphere during erection, operation, maintenance, end-of-life management, and failure of gas insulated equipment. As shown in the paper from manufacturers, technical solutions exist to replace SF6 in power equipment, even if the dielectric and arch switching characteristics of the gas are unbeatable. What are the development pathways to adopt SF6-free equipment? What R&D and pre-normative activities are deemed important in view of the deployment of such technologies?

Amélie LAFRAGETTE - FRANCE

SF_6 alternative solutions : closely collaboration with suppliers

- Alternative solutions available on the market and operationally validated: RTE has committed to implement them for all its new projects.

- For alternative solutions not yet available on the market:
  - alternative in the R&D phase: RTE supports suppliers in setting up R&D projects financed by European research funds. RTE provides, among other things, letters of support.
  - alternative close to the industrialization phase, RTE participates in pilot projects, enabling it to make an active contribution to the pre-normative phase.

SF_6 alternative solutions

- RTE with 4 other European TSOs, have recently decided to accelerate SF_6 alternative technologies' validation efficiency by avoiding double TSOs effort on validation stage. Main outcomes of this jointly work:
  - global view of pilots concerning SF_6 alternative solutions
  - recognition of tests done by another TSO
  - harmonized testing methodology and criteria
  - proposed plan of distributed pilot's assessment between TSO
- Beyond the benefits in terms of CO_2 equivalent emitted into the atmosphere, it is necessary to verify that the alternative solutions to SF_6 do not have other significant impacts on the environment and/or health