

This contribution aims to answer question 11 from the A3 special report related to the expected size of future switchgear for 420 kV based on Clean Air insulation and vacuum switching technology.

The use of Clean Air (dry synthetic air) with GWP = 0 is a long-term proven technology and future-proof for any kind of regulations. A basic study for circuit breakers with series-connected VIUs and voltage levels ≥ 420 kV is given in paper 11068.

The following statements result related to the size of future equipment:

- For live-tank circuit breakers for 420 kV:
 - Filling pressure (~ 8 bar) comparable to SF₆ equipment.
 - Dimensional footprint is equal to SF₆ equipment.

