

# MANAGEMENT OF SF6 AND GAS FILLED SWITCHGEAR



## OVERVIEW

Threepwood Consulting has an expert knowledge of legislation, standards and practices for managing all aspects of SF6 in electrical networks. Here is one case study with details

## CASE STUDY

The Energy Networks Association contracted Threepwood Consulting to carry out an independent assessment of SF6 switchgear emissions and the impact of moving to SF6-free switchgear

## OBJECTIVES



Quantify and analyse SF6 emissions by UK TSOs and DNOs



Identify SF6-free alternative switchgear and their impacts



Quantify the impact to DNOs of moving to non-SF6 technologies



Assess the costs and benefits over the lifecycle for non-SF6 switchgear



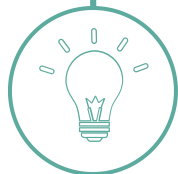
### PROJECT AIM

Assist ENA Member Companies in the assessment of the possible effects of a move towards the use of SF6-free distribution and transmission switchgear



### PROJECT CHALLENGES

- Meeting deadline set by the EU
- Quantifying SF6 switchgear populations and leakage across operators
- Identifying new SF6-free technologies across Europe



### PROJECT SOLUTION

Threeepwood Consulting successfully delivered the Report to ENA and its Member Companies which has enabled them to:

- Understand the extent of SF6 emissions across different voltages and switchgear types and their impact
- Identify new SF6-free switchgear technologies and their maturity
- Identify the likely changes in substation design requirements to accommodate non SF6 switchgear
- Quantify the costs & benefits of moving away from SF6 switchgear

## KEY RESULTS

Validated SF6  
Emissions

Variations in SF6  
leakage rates

Identified new  
SF6-free  
technologies

Risk Analysis

Quantified Costs  
& Benefits



*'SF6 has the highest Global Warming Potential (GWP) of any fluorinated greenhouse gas and there is a legal duty and environmental obligation on electricity network operators to limit their emissions and identify suitable alternatives to using SF6.'*