

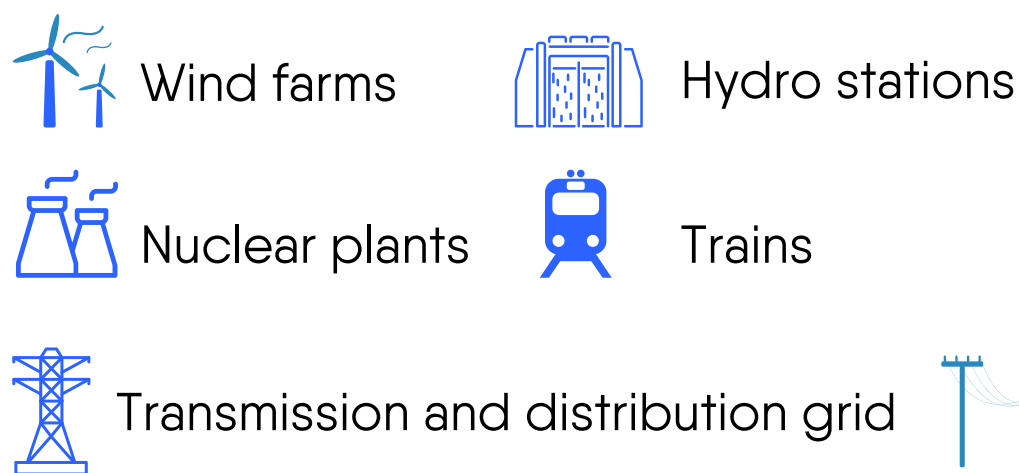
Why the revision of the F-Gas Regulation is crucial for the reliability and safety of the power system

In the revision of the F-Gas Regulation, it is currently proposed to ban SF₆-based technologies. SF₆ is an insulating gas used in switchgear.

What are switchgear?

 Set of switches which connect or disconnect the flow of power

Where are switchgear?



 In general, every group of 200 houses requires a substation with switchgear

Millions of switchgear are present all over power generation, transmission and distribution

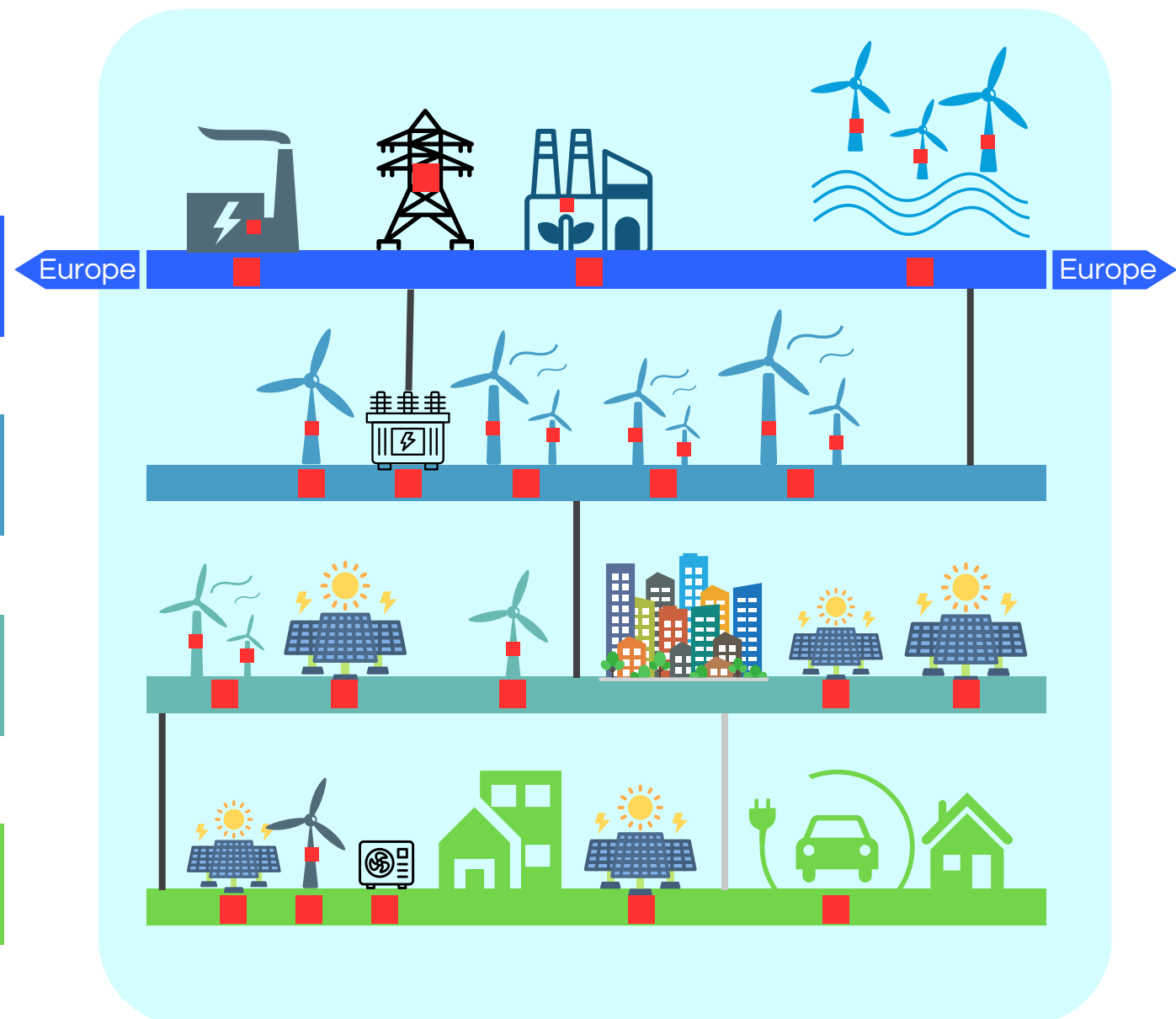
■ Switchgear

Transmission grid
EHV

Distribution grid
HV

Distribution grid
MV

Distribution grid
LV



Essentially, all connections to the power grid require switchgear. Without switchgear it is not physically possible to connect large loads (e.g. motorway EV charging stations, data centres, renewable generation – wind farms, solar farms) – and connection to the grid is paramount if decarbonisation targets are to be met:

 **Triple**
the electrification rate
by 2050

 **+ 63 million**
EVs by 2030

 **+ 34 million**
heat pumps by 2030

 **+ 605 GW**
wind and solar capacity
to connect by 2030

SF₆ in switchgear must be phased out in a timely and realistic manner to ensure the safety and reliability of the power system

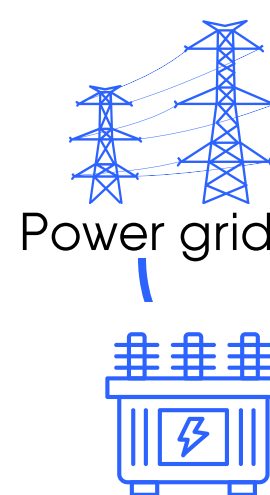
 Alternatives
 Ban SF₆
Threatened by insufficient **market availability of alternatives** and inadequate **tendering processes**

Manufacturing
of equipment



Threatened by impossibility to put in operation **remaining stock** of switchgear

Incorporation
into the network



0.1 %
Annual leakage
rate of switchgear
in question

Threatened by technically and economically unfeasible **leak checks**

Supply
of electricity

 250 million
EU customers



Ensured by the **exemption** of switchgear with **less than 6 kg of SF₆** from leak checks

Ensured by clear reference to **placing on the market** of switchgear in ban

Ensured by **adequate derogation scheme** to phase out SF₆ with **all available alternatives**

A single 420 kV switchgear secures the electricity supply for about **2 million customers**