



# Policy approaches to advance Green Cooling along the cold chain: Some examples from EU and Germany

Sebastian Schnatz | Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection | 10.10.23

# Overview

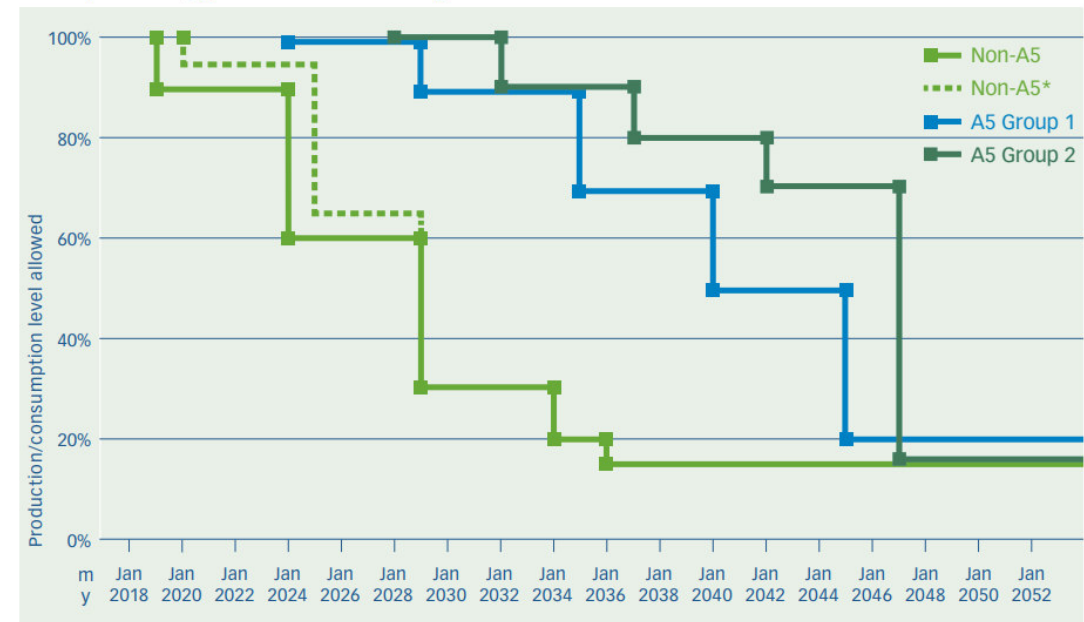


- Kigali Amendment to the Montreal Protocol
- EU legislation to control F-gases
  - F-gas Regulation 2014 (currently under revision)
  - F-gas Regulation 2023 (preliminary agreement on 5th October 2023)
  - MAC Directive
- Supporting policies and measures in Germany
  - Funding programmes and labels
  - Scientific research and information campaigns (German Environment Agency)

# Kigali Amendment

- The Kigali Amendment to the Montreal Protocol was agreed at global level in 2016.
- It includes obligatory HFC phase-down schedules for all countries of the world.
- It is expected to reduce global warming by up to 0.5 degrees Celsius.

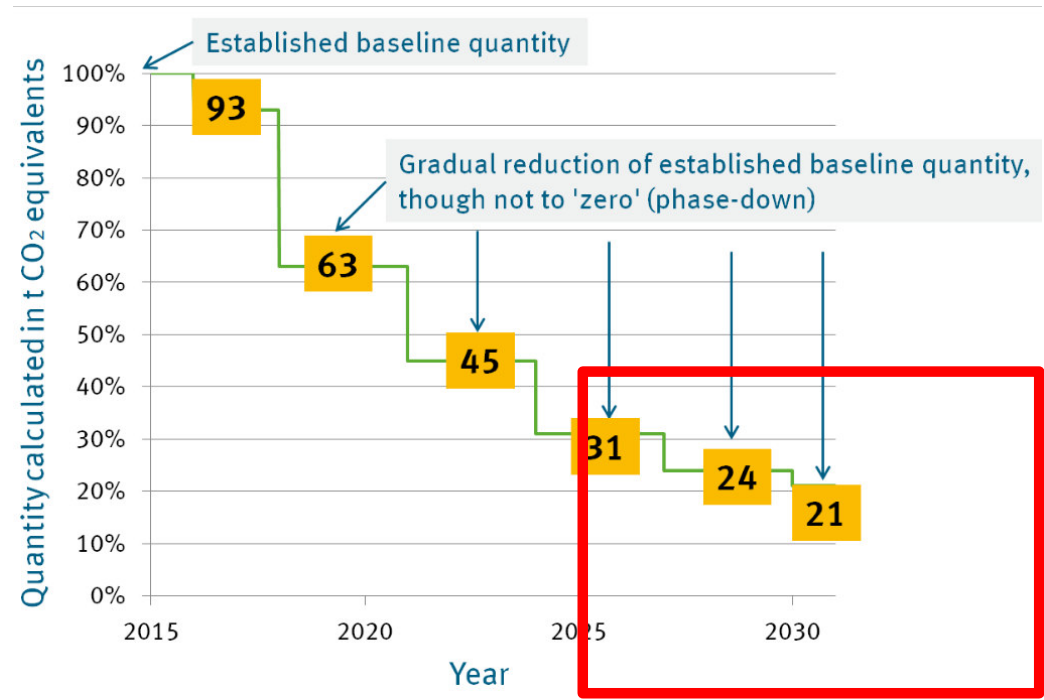
*HFCs (Annex F) production/consumption reduction schedule*



# F-Gas Regulation 2014

- **Quota system** to limit the total amount of HFCs that can be sold in the EU from 2015 onwards
- **Banning the use** of high GWP F-gases in many new types of equipment
- **Preventing emissions** of F-gases from existing equipment by requiring checks, proper servicing and recovery

HFC Phase down schedule in EU from 2014



\* HFC phase down schedule will from 2025 on be more ambitious with new F gas regulation!

# New F-Gas Regulation!

- Tighter reduction schedule for **consumption** of HFC and phase out by 2050
- Dedicated reduction schedule for **production**
- New bans for placing on market, including **full F-Gas bans** in some new equipment and foams
- **Export ban** for equipment with high GWP refrigerants

Europe agrees F-gas deal

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EIA: F-gas deal "will drive innovation"

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EUROPE  
of HFC

UK: The London-based Environmental Investigation Agency has welcomed today's agreement on a revised European

The German government promotes the direct switch to climate and environmentally friendly alternatives when implementing the Kigali Amendment.

# Funding programmes and initiatives

## National

### Kälte-Klima-Richtlinie

- Funding programme for energy-efficient refrigeration systems using natural refrigerants in stationary applications.

## International



### Alternatives to harmful F gases



Despite their huge impact on the climate, fluorinated greenhouse gases (F gases) are still deployed as coolants or propellants in air conditioning units, refrigerators, foams and insulation materials. Depending on the substance, the greenhouse effect may be 100 to 24,000 times higher than for carbon dioxide. Reducing emissions from these substances requires the targeted replacement of F gases by environmentally friendly alternatives or a switch to alternative technologies.

#### Selected projects

- ↻ [Demonstration Project in India for Converting a Production Facility to the Manufacture of Climate-Friendly...](#)
- ↻ [Management and Destruction of ozone depleting and climate-damaging substances in cooling devices](#)
- ↻ [Cool Up: Upscaling Sustainable Cooling](#)
- ↻ [Cool Contributions fighting Climate Change \(C4\)](#)

#### Funding area

# The German Ecolabel



Good for me.  
Good for the environment.

- The Blue Angel is an independent and credible label that sets standards for environmentally friendly products and services. It is a guide for purchasing.
- We have ecolabels to identify products that work with natural refrigerants and are characterized by additional environmentally friendly properties. Examples:
  - **Heat pumps (DE-UZ 230)**
  - **Liquid cooler (DE-UZ 231)**
  - **Air Conditioners (DE-UZ 204)**



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