



Strasbourg, 5.4.2022  
SWD(2022) 97 final

**COMMISSION STAFF WORKING DOCUMENT**  
**EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT REPORT**

*Accompanying the document*

**Proposal for a**  
**REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**  
**on fluorinated greenhouse gases, amending Directive (EU) 2019/1937 and repealing**  
**Regulation (EU) No 517/2014**

{COM(2022) 150 final} - {SEC(2022) 156 final} - {SWD(2022) 95 final} -  
{SWD(2022) 96 final}



Emissions from fluorinated greenhouse gases (F-gases) result in **climate warming**. Preventing such emissions is an important contribution to achieve the **EU's climate targets** in the **European Green Deal** and living up to our commitments under the **Paris Agreement on Climate Change** and the **Montreal Protocol on substances that deplete the ozone layer** that regulate F-gases. Cost-efficient action at EU level on F-gases will support Member States to reach their national greenhouse gas target under the Effort Sharing Regulation.

**Regulation (EU) No 517/2014 on fluorinated greenhouse gases** is the EU's main instrument to avoid F-gas emissions and to comply with the Montreal Protocol. **F-gases are man-made chemicals** that are used for many different purposes, e.g. as refrigerants in cooling equipment and air conditioners including heat pumps, in chemical production, as the propellant in asthma sprays or as insulating materials in electrical transmission equipment or foams in buildings. Emissions occur when the gases are produced, used in products or equipment or when the latter are disposed of.

An **evaluation** found that the F-gas Regulation reduces emissions considerably and that it works relatively well. However, the Regulation **requires more ambition in light of the reinforced EU's 2030 climate target and the goal of reaching climate neutrality by 2050**. Furthermore, **Montreal Protocol compliance cannot be ensured in the longer term** with the current rules. There are also some **implementation challenges** including the need to stop illegal activities, and some **gaps and inefficiencies in monitoring**. A review also offers the possibility to enhance the Regulation's **clarity and coherence** with other policies.

**The Commission will propose a revision to the Regulation on the basis of this impact assessment. Three option packages** were designed to address the issues identified to a varying extent. **Option 1** consists of measures that **ensure compliance with the Montreal Protocol, and seeks to save additional emissions and improvements** that can be done at **quite low costs and effort**. **Option 2** includes, in addition, measures that reduce emissions further and ensure more comprehensive monitoring and control, **associated with moderate costs**. **Option 3** includes all measures considered useful and technically feasible, also including those that may come at a **high cost or effort**.

**Option 2 is the preferred combination of measures.** The first option package appears insufficient in the current political context as it fails to save more emissions than the baseline by 2050, despite removing a quantitatively important exemption from the quota system, and the third option package appears too costly compared to the benefits it would generate, i.e. leading to a very high burden for a few sub-sectors while resulting in only few additional emission savings compared to Option 2.

Compared to today, **Option 2 will further restrict the quota amount available** for placing hydrofluorocarbons on the market each year until 2050, and EU producers and importers will have to start **paying for their quota rights**. Several types of new equipment will also become subject to **F-gas prohibitions** (e.g. air conditioning and switchgear) and emission **prevention measures are extended**. Option 2 will **align the**

**Regulation with the Montreal Protocol by removing some exemptions**, by introducing a **separate production phase-down** for hydrofluorocarbons, and by **ending trade with non-Parties from 2028**. Moreover, specific requirements on customs processes and economic operators will be introduced to **prevent illegal activities**, while **equipment service personnel will be more broadly trained** on alternative technologies. Finally, **monitoring** and company **reporting** activities will become both more complete and fit-for-purpose.

**Option 2 will save emissions amounting to 40 MtCO<sub>2</sub>e by 2030 and 310 MtCO<sub>2</sub>e by 2050** on top of the amount the current Regulation would achieve (i.e. savings of 430 and 1990 MtCO<sub>2</sub>e, respectively). While some users of equipment will face price increases for hydrofluorocarbons due to stricter quota limits, **overall Option 2 will result in cost savings** for equipment users in the long run due to energy savings. **The administrative costs will increase** moderately for industry, Member States and the Commission, notably for measures to align with the international rules and achieve better controls.

In response to the natural gas crisis due to recent geopolitical events, the Commission has proposed to advance the roll-out of heat pumps. While it is important to increase both the energy efficiency and limit the direct F-gas emissions of heat pumps, the quota system in Option 2 provides sufficient margin for this higher growth, even if a slightly slower conversion of small heat pumps to climate-friendly alternatives is considered.

**Thus, the phase-down appears coherent with the targets for renewable energy, even if the significantly higher heat pump growth needed in the light of the current natural gas energy crisis and a resulting slightly slower conversion of small heat pumps to climate-friendly alternatives is taken into account.**

**Stakeholders were consulted extensively.** They agree that it is necessary to review the Regulation now and that the review should build on existing measures. Industry, Member States and NGOs, in general, **support the measures addressing the implementation challenges and compliance with the Montreal Protocol**. Regarding the ambition level for the HFC phase-down and prohibitions, notably related to F-gas use in heat pumps, some industry stakeholders consider that the current Regulation is sufficiently ambitious, whereas innovators and manufacturers of climate-friendly technologies are pushing for stronger policy drivers to market their solutions. The latter is also supported by NGOs and many competent authorities. This is reflected in the three options examined.