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EFCTC response to Annex XV report, annex, and appendix submitted in the context of the proposal for a universal restriction of PFASs under REACH

This document has been prepared and submitted to the ECHA public consultation on the proposed universal restriction of PFASs on behalf of [EFCTC](#) (the European FluoroCarbons Technical Committee), a sector group of [Cefic](#) (the European Chemical Industry Council), representing the European fluorocarbons manufacturers.

EFCTC members note the inclusion of Fluorinated gases (F-gases) in the scope of the proposal prepared by the competent authorities of Denmark, Germany, Norway, Sweden, and the Netherlands.

Based on the content of the Annex XV Report and its annexes and appendixes, EFCTC has prepared this submission to provide some clarifications regarding the existing legislation covering F-gases and the relevant provisions to minimise emissions and encourage circularity, as well as more information on Trifluoroacetic acid (TFA), a degradation product of some F-gases.

It should be noted that EU competition law prevents EFCTC, as a sector group of Cefic, from discussing and advocating specific uses or products. EFCTC is aware of the preferred sector or application-based approach for this process, and has raised awareness with the F-gas value chain about this restriction for the past few years, urging downstream users companies and associations to collect and provide data into the ongoing consultation. EFCTC now encourages RAC and SEAC to rely on the information and data provided by companies and the downstream users of F-gases regarding the individual applications, in order to assess possible specific time-(un)limited derogations.

Based on the information in this submission and on the additional information provided by other key stakeholders of the F-gas value chain, EFCTC would like to propose the following derogations for F-gases:

❖ **A time-unlimited derogation for the substances listed in Annex I and Annex II Section 1 of the F-gas Regulation revision proposal.**

The regular review under the F-gas Regulation enables the performance of industry in reducing emissions and improving recovery and reuse to be assessed and, if necessary, further measures adopted. These aspects are expected to be strengthened under the upcoming revised F-gas Regulation. While the F-gas Regulation does not specifically address TFA and its emissions, measures to reduce HFC/HFO/HCFO emissions have a direct effect on TFA emissions. In the opinion of EFCTC, this ability for the F-gas Regulation to take into account emissions trends, which directly affect TFA emissions, enables the F-gas Regulation to have a similar effect as the other time-unlimited, more general derogations, e.g. for PFASs used as

active substances in Plant Protection Products (PPP), Biocidal Products (BP) and human and veterinary Medicinal Products (MP), as these are addressed under their respective regulations. Moreover, F-gases are already subject to extensive reporting requirements, not significantly different than the ones suggested by the Dossier Submitters for the PPP, BP and MP substances. EFCTC highlights once again the importance of relying on the data and additional information submitted by companies (both producers and downstream users), as the boundaries of competition law prevent EFCTC from detailed discussion on market-sensitive data.

Should the possibility to grant a time-unlimited derogation for the substances listed in Annex I and Annex II Section 1 of the F-gas Regulation revision proposal be considered not to be feasible by the ECHA Committees, we urge RAC and SEAC members to **carefully consider any application-based derogations which might be suggested by the representatives of the F-gases value chain and supported by provided evidence.**

- ❖ **A time-unlimited derogation allowing the use of F-gases for the maintenance and refilling of equipment until the end of its lifetime for all the uses permitted under the EU F-gas Regulation.**

It is important to guarantee that the U-PFAS restriction does not impede the use of F-gases for maintenance to avoid undermining the EU goals towards Circular Economy. Allowing the continued use of F-gases would support the capacity to service equipment that has not yet reached its end of life, avoiding a premature decommissioning of the equipment and subsequently unnecessary waste.

- ❖ **A time-unlimited derogation allowing the use of recycled and reclaimed F-gases for the maintenance and refilling of equipment until the end of its lifetime for all the uses permitted under the EU F-gas Regulation.**

As mentioned in the Annex XV report, F-gases are the only substances within the scope of the proposed restriction that already have a legal obligation/incentive to be recovered and then either recycled, reclaimed, or destroyed (as per Article 8 of the F-gas Regulation). The quantities of F-gases being recycled and reclaimed have increased significantly since the entering into force of the current F-gas Regulation and several professional reclamation companies have invested significantly into new F-gas reclamation technologies and facilities in the EU¹. Recycled and reclaimed F-gases also have specific labelling requirements, which allow for quick identification and backtracking to the recycler / reclaimed of the F-gases². The proposal for the revised F-gas Regulation extends these provisions to HFOs and HCFOs. It is

¹ See more:

- <https://www.agas.com/news-insights/a-gas-buys-dutch-reclamation-business/>
- <https://www.coolingpost.com/world-news/a-gas-buys-dutch-recycler-btc/>
- <https://www.daikinchemicals.com/company/sustainability/refrigerant-reclamation.html>
- <https://life-prozon.eu/en/about-the-project/objectives>
- <https://www.lemondedusurgele.fr/equipements-et-services/10689/climalife-va-regenerer-les-fluides-voues-a-la-destruction>

² Regulation (EU) n°517/2014, Article 12, Point 6

important to guarantee that the U-PFAS restriction does not impede the use of recycled / reclaimed F-gases to avoid undermining the EU goals towards Circular Economy. Allowing the continued use of recycled/ reclaimed F-gases would support the capacity to service equipment that has not yet reached its end of life, avoiding a premature decommissioning of the equipment and subsequently unnecessary waste.

❖ **More adequate concentration limits applicable to F-gases**

The PFAS concentration limits of 25ppb for individual substances or 250 ppb for the sum of these indicated within the restriction proposal do not consider the procedures and processes for the manufacturing, supply, recovery, recycling and reclamation of HFCs, HFOs and HCFOs. For consistency, it is recommended that an impurity threshold based upon the AHRI 700 2019 Standard for Specifications for Refrigerants is applied, which is currently followed by the entire F-gas industry on a global level. This standard allows an impurity level of up to a maximum of 5000 ppm without any individual substance limits and applies to both, virgin and reclaimed F-gases. This is consistent with the EU F-gas Regulation, which requires reclaimed refrigerant to match the equivalent performance of a virgin substance.

The analytical methods included in the restriction proposal are not relevant to the practical analysis of HFCs, HFOs and HCFOs and their impurity levels because ambient air was taken as the matrix.

Detailed annexes have been included in the context of this submission to provide further information, while this document is a summary of the most relevant aspects and the key issues that EFCTC would like to bring to the attention of the RAC and SEAC members.

EFCTC remains available to answer any follow-up questions in the context of the inclusion of F-gases in this REACH restriction process.

Annexes

Annex 1 – Technical paper with general information on TFA (trifluoroacetic acid and its salts) and emissions calculations

- A detailed analysis explains why the most likely future emissions for the EU of HFCs, HFOs and HCFOs are forecast to be on a down trend to 2035. Importantly, atmospheric monitoring evidence shows that HFC-134a emissions have been overstated in recent years for the European region. The forecast is then used to estimate TFA generation from these substances, for the EU.
- The formation and deposition of TFA from HFCs, HFOs and HCFOs has been widely studied, and results conclude that the current low concentration of TFA produced by the degradation of several HFCs and HFOs is currently judged not to pose a risk to human health or to the environment.
- Extensive studies for the ecotoxicological effects have demonstrated that TFA from HFCs, HFOs and HCFOs is of no health concern at the measured concentrations and at these concentrations is not harmful to ecosystems. TFA occurs naturally in the oceans at concentrations similar to those found in rainwater.

Annex 2 – Paper on reporting requirements

- Mandatory reporting requirements exist both at EU and global level for F-gases overall covering the entire life cycle of these substances.

Annex 3 – Paper on emissions minimisation

- The main goal of the 2014 EU F-gas Regulation is to prevent additional emissions of F-gases. Prevention of emissions is sought through rules on containment, use, recovery and destruction, including mandatory leak checks every 3/12/24 months, detailed record keeping, mandatory leak detection systems and mandatory recovery for a large number of equipment.
- The 2014 F-gas Regulation included provisions on containment and recovery mainly for HFCs, while the 2022 Commission proposal looks at extending them to HFOs and HCFOs, and this will contribute to the further minimisation of F-gases emissions.

Annex 4 – Technical paper on destruction and incineration

- Destruction technologies for HFCs are approved under the Montreal Protocol following independent evaluation of performance criteria, including the efficiency of destruction. The performance of approved destruction technologies is well characterised and achieve a high efficiency of destruction (minimum 99.99% for concentrated HFCs). Detailed reports on destruction technologies and applicable criteria have been published since 1992.
- It has been reported that 17 destruction facilities are registered in 2021 for destruction of F-gas Annex I & II substances in the EU (HFCs, HCFCs, HFOs, and HCFOs). Municipal solid waste and rotary kiln incineration are approved for destruction of foams containing HFCs.
- HFOs and HCFOs, having double bonds, have reduced stability compared to HFCs and technologies approved for HFC destruction are expected to achieve the same efficiency of destruction, if operated under conditions that destroy HFCs.

Annex 5 – Technical paper on limitations of detection of impurities in F-gases

- The PFAS impurity limits indicated within the restriction proposal do not consider the procedures and processes for the manufacturing, supply, recovery, recycling and reclamation of HFCs, HFOs and HCFOs.
- It is recommended that a specific concentration limit is established for fluorinated impurities as a threshold for the virgin and reclaimed F-gases which, for consistency, should be based upon the AHRI 700 2019 Standard for Specifications for Refrigerants, with allowable fluorinated impurities in F-gases of up to a maximum of 5000 ppm, without any individual limits.
- The PFAS impurities present in HFCs/HFOs/HCFOs are short-chain substances (typically $\leq$ C4) which have no potential for bioaccumulation and will degrade in the atmosphere.
- The establishment of impurities concentration limits should be justified from a toxicological / ecotoxicological perspective, and thresholds limits should be based on both product safety assessment (for humans or the environment) as well as on the practical possibility of routine measurement and enforcement. The proposed 25 ppb level threshold it is not justified from the hazard point of view.

- The analytical methods included in the restriction proposal are not relevant to the practical analysis of HFCs, HFOs and HCFOs and their impurity levels because the matrix taken is not representative.

Annex 6 – Regulatory Management Options Analysis on 8 selected F-gases

- The analysis has concluded that there is no single RMO that would effectively address the concerns related to the lifecycle of F-gases. As such, it is suggested that a combination of measures could be the most proportionate way forward to both address the concerns and avoid unnecessary costs for both industry and society.
- REACH restriction, has been found to be effective at reducing risk yet significant limitations remain regarding the practicability of enforcement (e.g., illicit imports) and ease of implementation (e.g., limited knowledge of the feasibility of alternatives for many uses at the time that derogations are defined). When combined with the economic impacts (i.e., loss of business for F-gas manufacturers and importers when alternatives are not feasible for them, and loss of business for downstream users when their products are not feasible without the use of or without containing F-gases), which in the absence of alternatives propagate through the supply chain, this raises questions over the potential overall negative impacts from its implementation.
- As F-gases are so key to the functioning of society at present, it is recommended that further evaluation is carried out to assess the proportionality of the REACH restriction proposal to ensure that an undue burden is not placed on industry, regulators or wider society.

Annex 7 – Paper on End of Life

- F-gases can be recovered, recycled or reclaimed, and reused (RRR) and it is important to guarantee that the U-PFAS restriction would not impede the use of recovered / recycled or reclaimed F-gases to avoid undermining the EU goals towards Circular Economy.
- Banning the use of recovered / recycled F-gases would severely hinder the capacity to service equipment that has not yet reached its end of life, causing a premature decommissioning of the equipment and subsequently unnecessary waste.

Annex 8 – EFCTC submissions to the previous calls for evidence launched by the Dossier Submitters

- The information submitted by EFCTC to this consultation is complementary to what has been provided in the context of the 2020 and 2021 calls for evidence and included in Annex 8.
- The contributions should be considered jointly in order to have the full overview of the substances and sector.

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About EFCTC

The European FluoroCarbons Technical Committee is a Cefic Sector Group that monitors legislation related to HFCs (hydrofluorocarbons), and HFOs (hydrofluoro-olefins) in the EU and at global level.

Fluorocarbons are used as feedstock, as refrigerants, as solvents and as blowing agents for insulation plastic foams.

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