

Complementary note to the PFAS Survey of the 2nd Stakeholder Consultation

In addition to the replies to the PFAS Survey¹, EPEE, APPLiA, AREA, ASERCOM, EFCTC, EHI, EHPA, EPFA, EUROVENT and Transfrigoroute International would like to provide further input and feedback to the “Report summary F-Gas uses: Heating, ventilation, and air-conditioning and refrigeration (HVACR), foam-blowing agents, solvents, propellants, cover gases and fire suppressants” (‘Summary Report’), accompanying the 2nd Stakeholder Consultation (‘CfE’).

Scope of the Registry of Intention (‘RoI’)

Following our previous joint letter of 13 August 2021, and your feedback through the supplementary “Information Document” accompanying the CfE, we understand that the scope of the PFAS definition in view of the restriction under REACH² could still change in the near future.

We also understand that some PFAS substances may belong to several of the groups indicated in the Summary Report, due to their inherent complexity. Therefore, the list of the PFAS substances shared by Norway is a non-exhaustive list of PFASs and should be regarded only as guidance on the current investigation.

Other non-Refrigerant uses of PFAS in HVACR

It is also useful to note that “non-refrigerant” PFAS uses are also relevant for the Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) systems. While in the Summary Report refrigerants have been thoroughly examined, none of the summary reports are likely to adequately address the other uses of PFAS by the HVACR industry. Therefore, certain products (such as coatings, sealings, bearings etc.) may have been overlooked in the current scope of the PFAS REACH restriction. Consequently, these applications were forced to be considered into the “Lubricants” and “Electronics” workstreams, despite not being an ideal fit to describe and evaluate these uses of PFAS.

Given the above, we recommend that a new HVACR workstream that encompasses these non-refrigerant uses of PFAS is also established so as to adequately acknowledge the unique and vital position of the HVACR industry for society. Moreover, the transition to low global warming potential refrigerants while also transitioning other PFAS components in HVACR systems to non-PFAS alternatives would be an arduous task. It would likely lead to the discontinuation of a number of product lines that are necessary to help the EU achieve some of the goals outlined in the European Green Deal, and seriously delaying including the development of alternative technologies. The same could apply to other F-Gas uses such as blowing agents in thermally insulating foams.

Data on tonnage and emissions

From the Summary Report, we understand that Regulation No 525/2013³, repealed by the EU Governance Regulation No 2018/1999, and its Greenhouse Gas (‘GHG’) Inventory elaborated to report the EU aggregated values to the UNFCCC are the legal basis used to collect the data by Norway and Exponent.

¹ <https://echa.europa.eu/calls-for-comments-and-evidence/-/substance-rev/66505/term>

² <https://echa.europa.eu/regulations/reach/legislation>

³ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R0525&rid=2>

However, it is still unclear how this data was retrieved from the GHG Inventory. Since there is still a lack of clarity in relation to this evaluation and how it can be aligned with the current RoI chemical structure. By way of example, Annex I of Regulation No 525/2013, repealed by Regulation No 2018/1999 lists HFC-32, which on the contrary is not covered under the RoI definition.

Therefore, **we would appreciate receiving the reference quantitative data** used to develop such a summary report and its accompanying Annexes. For instance, we would be keen in acknowledging the data used to calculate and provide the **output figures as found in Appendixes IV and V.**

Additional comments to the PFAS Survey replies

The **F-Gas Regulation No 517/2014** specifies a robust recovery mechanism for all substances within scope, including the prevention of emissions, the precautions to limit emissions to the greatest extent possible during production, use, transport, and storage, as well as at the recovery, recycling, reclaim (RRR), destruction and disposal phase. Leakage control is of key importance for reducing emissions, ensuring safety, and maintaining energy efficiency.

Additional measures are also established in the context of the Eco-design Regulations and the General Product Safety Directive ('GPSD')⁴, the Low Voltage Directive ('LVD')⁵, ATEX Workplace Directive⁶ and the Industrial Emissions Directive ('IED')⁷, as well as the Pressure Equipment Directive ('PED')⁸, Machinery Directive⁹, Seveso III Directive¹⁰, national building codes, EN378, EN60335-2-40, EN60335-2-89 and the Construction Products Regulation, in relation to the thermal insulation products. Additional information is also contained in the prEN 13313 and EN 13313/pr, EN ISO 22712 Standard¹¹ on the competence of personnel.

Waste management measures already in place

The F-Gas Regulation is already the perfect framework to complement the general Waste Framework Directive (WFD) in relation to F-Gases and establishes very detailed recovery, recycling and reclamation (RRR) requirements for F-gases including PFAS, already since the first 2006 F-Gas Regulation was adopted. The above, as well as other measures also on certification and training in the F-Gas Regulation play a key role in reducing emissions and are fully in line with the objectives of circular economy and ensure the correct treatment and disposal of F-Gases including PFAS.

Moreover, for waste management issues, it is important to note **Annex VII of 2012/19/EU (WEEE II)**¹² establishes that *"all equipment containing gases that are ozone depleting or have a global warming potential (GWP) above 15, such as those contained in foams and refrigeration circuits: [they] must be*

⁴ https://ec.europa.eu/info/business-economy-euro/product-safety-and-requirements/product-safety/consumer-product-safety_en

⁵ https://ec.europa.eu/growth/sectors/electrical-engineering/lvd-directive_en

⁶ https://ec.europa.eu/growth/sectors/mechanical-engineering/atex_en

⁷ <https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>

⁸ https://ec.europa.eu/growth/sectors/pressure-gas/pressure-equipment/directive_en

⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32006L0042>

¹⁰ <https://ec.europa.eu/environment/seveso/>

¹¹ <https://www.iso.org/standard/73739.html>

¹² <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012L0019&from=EN>

properly extracted and properly treated.” Therefore, WEEE Annex VII is already requiring the removal of substances, mixtures and components of F-Gases e.g., HFC.

In addition, substances having a GWP>15 have to undergo a proper treatment and in the near future we can expect an extension to all refrigerants. In 2022, the EU Commission will start the evaluation process of the WEEE Directive in view of its review. This is the right moment to strengthen the collection and treatment requirements for refrigerants containing equipment.

Also, all “chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC) or hydrofluorocarbons (HFC), hydrocarbons (HC),” as substances/mixtures need to be disposed of or recovered in compliance with **Directive 2008/98/EC (i.e., WFD)**¹³. This means that all MSs will need to have in place the necessary infrastructure and control systems to ensure adequate waste management of F-Gases. An important example is given by France, where a specific system to report and track F-Gases in waste is currently in place, under the national legislation. The beta version of this system is publicly available at the following link “[Trackdéchets](#)”.

Therefore, we would support a more harmonized approach in relation to the good practices and national initiatives established under the current regulatory framework.

Next steps

Lastly, we would like to confirm our on-going support of the activities of the five competent authorities in relation to the preparation of a PFAS Annex XV Dossier and will contribute with any further input, additional references and supporting studies as soon as available.

¹³ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0098&from=EN>



APPLiA: Home Appliance Europe represents home appliance manufacturers from across Europe. By promoting innovative, sustainable policies and solutions for EU homes, APPLiA has helped build the sector into an economic powerhouse, with an annual turnover of EUR 53 billion, investing over EUR 1.6 billion in R&D activities and creating nearly 1 million jobs. www.applia-europe.eu

AREA: AREA is the European association of refrigeration, air conditioning and heat pump contractors. Established in 1989, AREA voices the interests of 24 national associations from 21 countries representing 13,000 companies employing 110,000 people and with an annual turnover approaching € 23 billion. <http://area-eur.be/>

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. Contact: EFCTC Chairman: Dr. Nick Campbell, nick.campbell@arkema.com
EFCTC Secretariat: Angelica Candido, anc@cefic.be

EHI: EHI represents 90% of the European market for heat and hot water generation, heating controls and heat emitters, 75% of the hydronic heat pump market, 80% of the biomass central heating market (pellets, wood) and 70% of the solar thermal market. EHI Members produce advanced technologies for heating in buildings, including: heating systems, burners, boilers, heat pumps, components and system integrators, radiators, surface heating & cooling and renewable energy systems. In doing so, they employ about 120,000 people in Europe and invest over a billion Euros per year in energy efficiency. www.ehi.eu

EHPA: EHPA promotes awareness and deployment of heat pump technology in Europe. All activities aim at creating a market environment that facilitates a faster deployment of heat pump technology to unleash its benefits on a European level: efficient heating and cooling using renewable energy. EHPA also coordinates the Heat Pump Keymark – a European certification scheme for all heat pumps, combination heat pumps and hot water heater. For more information, please visit: www.ehpa.org

EPEE: EPEE represents the refrigeration, air conditioning and heat pump industry in Europe. Founded in the year 2000, EPEE's membership is composed of over 50 member companies as well as national and international associations from three continents (Europe, North America, Asia). With manufacturing sites and research and development facilities across the EU, which innovate for the global market, EPEE member companies realise a turnover of over 30 billion Euros, employ more than 200,000 people in Europe and also create indirect employment through a vast network of small and medium-sized enterprises such as contractors who install, service and maintain equipment. Please visit our website www.epeeglobal.org and www.countoncooling.eu for information about our sustainable cooling campaign.

EPFA: The European Phenolic Foam Association (EPFA) includes companies that share an interest in the manufacture and use of phenolic foam products within the insulation industry. The members are either producers of phenolic foam insulation, resin suppliers or are companies closely linked with the industry through the provision of other raw materials. <https://epfa.org.uk/>

Eurovent: Eurovent is Europe's Industry Association for Indoor Climate (HVAC), Process Cooling, and Food Cold Chain Technologies. Its members from throughout Europe represent more than 1.000 companies,



the majority small and medium-sized manufacturers. Based on objective and verifiable data, these account for a combined annual turnover of more than 30bn EUR, employing around 150.000 people within the association's geographic area. This makes Eurovent one of the largest cross-regional industry committees of its kind. The organisation's activities are based on highly valued democratic decision-making principles, ensuring a level playing field for the entire industry independent from organisation sizes or membership fees.

Transfrigoroute International: Established in 1955, Transfrigoroute International (TI) is the only specialist independent umbrella association for the temperature-controlled road transport industry at the European Union level. TI members include national associations representing the temperature-controlled sector, haulage companies involved with transport at controlled temperatures of foodstuffs and other goods in solid or liquid form, trailer manufacturers, manufacturers of refrigeration equipment and technical testing providers. TI membership is also open to companies providing technical assistance, insurance, damage assessment and legal services, and en-route support.