Brussels, 19 March 2021

EHI POSITION on PFAS action plan

This paper presents the views of the European Heating Industry on the intention of 5 countries[i] preparing an analysis of restriction options for the per- and polyfluoroalkyl substances (PFAS) in view of submitting a future REACH restriction dossier. The October 2020 EU Chemicals Sustainability Strategy is even proposing an EU PFAS action plan phasing-out all non-essential uses of PFAS.

EHI members manufacture heat pumps which rely on fluorinated greenhouse gases (F-gases), such as hydrofluorocarbons (HFCs) and hydrofluoroolefins (HFOs). These substances could be affected by the 5 countries' call for evidence supporting an analysis of the PFAS restriction options, because of an extension of the original PFAS[1] definition to include 'substances that contain at least one aliphatic -CF2- or -CF3 element'.

Heat pumps used for space and water heating are key technologies for the decarbonisation of building and for achieving the EU's 2030 and 2050 targets. Alongside other highly efficient technologies, heat pumps should be promoted to replace old and inefficient stock of heating equipment in the EU.

Refrigerants - F- gases and natural refrigerants - used in heat pumps are essential to their functioning, these gases are the working fluid of heat pumps that allow heat to be transferred from source to sink. Most heat pumps rely on HFCs to operate, conventionally these were refrigerant gases with a high global warming potential (GWP). However, the heating industry has invested significantly in the development of new efficient and innovative technologies, which those using of alternative lower GWP F-gases, such as lower GWP HFCs (contributing to the F-gases phase down according to the F-gas regulation (Regulation (EU) No 517/2014) and HFOs.

When manufacturers select alternative lower-GWP refrigerants and in particular F-gases, they take into account the substance's flammability, toxicity and/or high pressure, but also the intended application and energy efficiency of the heat pump when using the refrigerant. And although non-fluorinated alternatives are being used, they are not suitable to all heat pump systems due to their high flammability, toxicity and/or high pressure or their inferior energy efficiency.

Although we understand the concerns regarding PFAS, there is a need to evaluate the toxicological and physical properties in relation to persistence, bio-accumulation, mobility and toxicity of the individual HFCs and HFOs rather than to put them all in the same group. Currently, there is not sufficient evidence that (all) HFCs and HFOs are indeed of the same level of concern as the traditional PFAS; indeed, HFCs and HFOs are not classified as such in the ECHA database[2].

Furthermore, it should be noted that HFCs and HFOs in heat pumps are not intended to be released. On the contrary, the F-gas regulation limits the emissions of HFCs and HFOs as much as possible, by requiring tight refrigerant circuits, installed and maintained by F-gas accredited specialists. In addition,

[1] PFAS definition in OECD Environment, Health and Safety Publications Series on Risk Management, No. 39, ENV/JM/MONO(2018)7 (page 7).
[2] Some examples of common HFCs and HFOs: Joint-dossiers on R32, HFO1234yf, R125 and R134a in the assessment section, ECHA database.

any transfer of refrigerant needs to happen in closed systems in order to minimise or eliminate emissions. At the end of life, HFCs and HFOs needs to be recovered by F-gas accredited specialists so that the gases are recycled, reclaimed or destroyed.

Finally, if HFCs and HFOs remain in the scope of the proposed intention of restricting them under REACH, an evaluation is needed of what this restriction would mean in terms of compliance with the F-gas regulation, more specifically in terms of the HFC phase down and sector GWP limitations. The European Commission should identify which physical property (i.e. flammability, toxicity, pressure, energy efficiency, persistence, bioaccumulation or GWP[3]) should be prioritised and ensure a proper coordination between the F-gas regulation and the REACH restriction. To avoid any overlap and endangering the climate objectives and the implementation of the EU F-Gas Regulation, EHI recommends that F-gases remain regulated under this Regulation.

About EHI, the Association of the European Heating Industry
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

[3] For example: when the only possible alternative for an HFO with low GWP would be an HFC with high GWP