Letter to the attention of: Mr. Wopke Hoekstra, Commissioner for Climate Action

In copy:

Mr. Raffaele Fitto, Executive Vice President for Cohesion and Reforms

Mr. Dan Jørgensen, Commissioner for Energy and Housing

Ms. Jessika Roswall, Commissioner for Environment, Water Resilience and a Competitive Circular Economy

European Commission

B-1049 Brussels, Belgium

18 March 2025

Dear Commissioner,

We, a group of European organisations working on the reduction of fluorinated gas emissions, are writing to ask you to urge Member States to include refrigerant gas considerations in their upcoming national Social Climate Plan (nSCP) measures related to heat pumps. As the European Union seeks to rapidly accelerate the heat pump roll out through the Social Climate Fund (SCF) and other means, it should ensure that it is maximising emissions reductions by prioritising the roll out of climate friendly refrigerants. For further policy ideas to promote the uptake of natural refrigerant heat pumps, please see our recent report.

Currently the majority of heat pumps in use in the European Union use fluorinated gases (F-gases) as refrigerants. The most commonly used group of F-gases, hydrofluorocarbons (HFCs), have global warming potentials (GWPs) hundreds or thousands of times that of carbon dioxide (CO_2).[i] Throughout a heat pump's lifetime, including in manufacturing, installation, maintenance and decommissioning, these HFCs leak into the environment and contribute to climate change. This contribution will become increasingly relevant as the electricity grid – another source of heat pump emissions – decarbonises leading to a larger proportion of a heat pump's emissions coming from direct refrigerant leakage.

Thanks to the EU's world-first HFC phase-out and targeted new equipment bans under the F-gas Regulation, **many manufacturers are already offering alternatives using non-fluorinated refrigerants,** a group known as natural refrigerants. These include CO_2, propane, isobutane and ammonia, among others.

As Member States put together their nSCPs, the Commission should advise them to prioritise the adoption of future-proof refrigerant systems as part of any heat pump related measures. Not only are the costs of fluorinated refrigerants rising – and expected to continue to do so - thereby increasing maintenance costs, but data from the German market shows that, on average, natural refrigerant heat pumps are six to seven per cent more energy efficient than F-gas systems, delivering further long-term savings.[ii] [iii]

From a climate perspective, the phase out of HFCs in heat pumps is vital. Many of the heat pumps installed over the funding period of the SCF could still be in operation in 2050, therefore any installation of systems requiring the use of highly climate damaging refrigerants could seriously impact the EU's 2050 net zero target. The International Energy Agency estimates that **installing F-gas-free heat pumps can provide an additional ten per cent emissions reduction in the transition away from fossil fuel heating by eliminating direct leakage**.[iv] A transition to natural refrigerants would also eliminate the emission of climate and ozone damaging halocarbons inherent in the HFC production process.[v]

Evidence also shows that propane air-to-water heat pumps are typically more efficient at higher water output temperatures.[vi] This allows for retrofitting with reduced parallel measures such as radiator enlargement or underfloor heating installation as may be required by traditional low temperature devices, thus expanding the range of buildings and consumers able to undertake retrofits in the short term.

Natural refrigerants can be promoted by providing additional financial bonuses on top of standard heat pump subsidies. This has already been implemented in Germany, where homeowners are eligible for an additional five per cent grant if they choose a natural refrigerant heat pump. Data from the German government suggests that this has already had a positive impact on the proportion of heat pumps being installed using a natural refrigerant.[vii]

Ultimately, the Member States should also signal their intent by announcing a date beyond which they will only fund the installation of natural refrigerant heat pumps. Again, as is already the case in Germany where the government has set 2028 as the year in which it will stop funding any heat pump that doesn't use a natural refrigerant.[viii]

We thank you for your consideration of this letter and would be happy to meet with you to discuss this matter further.

Yours sincerely,

Mary Rice

Executive Director, Environmental Investigation Agency (EIA)

On behalf of:

2Celsius

CLASP

Cool Heating Coalition

Deutsche Umwelthilfe (DUH)

ECODES

European Environmental Bureau (EEB)

Legambiente

ZERO

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[i] IPCC Assessment Report 6

[ii] Öko-Recherche (2025). *Quarterly quota price monitoring - Q4 2024.* Available at: https://climate.ec.europa.eu/eu-action/fluorinated-greenhouse-gases/documentation/reports_en

[iii] Federal Office for Economic Affairs and Export Control of Germany (Bundesamt für Wirtschaft und Ausfuhrkontrolle (BAFA)) (2024). *Liste der förderfähigen Wärmepumpen mit Prüf-/Effizienznachweis.* Available here: https://www.bafa.de/SharedDocs/Downloads/DE/Energie/beg_waermepumpen_pruef_effizienznachweis.html

[iv] International Energy Agency (IEA) (2022). *The Future of Heat Pumps.* Available at: https://www.iea.org/reports/the-future-of-heat-pumps

[v] Environmental Investigation Agency (EIA) (2024). *Montreal Protocol: time to go further*. Available at: https://eia-international.org/wp-content/uploads/2024-EIA-Montreal-Protocol-Time-to-go-further-SINGLES.pdf

[vi] Energy Systems Catapult. On behalf of the Department of Energy Security and Net Zero of the United Kingdom (DESNZ). (2023). *Interim Heat Pump Performance Data Analysis Report*. Available at: https://es.catapult.org.uk/wp-content/uploads/2023/03/EoH-Interim-Heat-Pump-Performance-Data-Analysis-Report-1.pdf

[vii] Federal Ministry for Economic Affairs and Climate Action of Germany (Bundesministerium für Wirtschaft und Klimaschutz). (2024). *Technical information on the BEG*. Available at: https://www.energiewechsel.de/KAENEF/Redaktion/DE/Dossier/beg.html

[viii] Federal Ministry for Economic Affairs and Climate Action of Germany (Bundesministerium für Wirtschaft und Klimaschutz). (2023). *Guideline for federal funding for efficient buildings – individual measures (BEG EM)*. Available at: https://www.energiewechsel.de/KAENEF/Redaktion/DE/PDF-Anlagen/BEG/bundesfoerderung-f%C3%BCr-effiziente-gebaeude-einzelmassnahmen-20231229.pdf?__blob=publicationFile&v=3 [Accessed 18 Oct. 2024]