EPEE feedback following EU F-Gas Regulation review Stakeholder Workshop

Tuesday, 25 May 2021

Executive Summary

EPEE, representing the heating and cooling industry in Europe, has been a long-time supporter of the EU's 2014 F-Gas Regulation. Delivering tangible emission savings year after year since its entry into force – the highest of all non-CO_2 greenhouse gas emissions – the EU's 2014 F-Gas Regulation is an effective gold standard for regulating F-Gases, positioning the EU as a global leader.

EPEE believes that the ongoing review must therefore be used to fine-tune the regime building on existing requirements in an intelligent, forward looking way, without falling in the trap of dogmatic decisions.

EPEE would like to express strong concerns about the AnaFgas modelling which forms the basis for the development of policy options in the context of the ongoing review. In particular, the AnaFgas modelling does not integrate the CO_2 abatement contribution of heat pumps as a heating technology, and lacks granularity, since it does not reflect the existing refrigerant choice and disregards the importance of maintaining the EU industry's competitiveness.

Similarly, the AnaFgas model does not consider that F-Gases were originally introduced due to their excellent safety features which made them more reliable and safer to use as refrigerants when compared to highly flammable, highly toxic, or high-pressure alternatives. Therefore, the important principle of refrigerant choice remains at the very basis of the EU industry's competitiveness in order to foster innovation and is essential for the safe and reliable operation of RACHP equipment, as well as for its energy efficiency, affordability and existing safety standards and building codes that may restrict the use of flammable and toxic refrigerants.

Introduction

F-Gases are mainly used in heating and cooling which is of utmost importance for the EU to fulfil its Green Deal contract with future generations. Heating and cooling represent half of the total final energy consumption in Europe, and most of the EU's greenhouse gas emissions stem from energy.

The sector must decarbonise rapidly – particularly heating which is still largely based on fossil fuels. Electrical heat pumps will drive the decarbonisation of heating, providing demand side flexibility, thermal storage and reducing energy demand, all of which will facilitate the transition to renewable energies. In order to make this happen and further speed up the process, F-Gases are needed to accommodate the full variety of applications, safety and energy efficiency requirements.

EPEE welcomes the opportunity to provide additional input to the review of the F-Gas Regulation following the stakeholder workshop on 6 May 2021. In our submission the primary focus is on providing constructive feedback on the assumptions underpinning the AnaFgas model and on the market estimates that are derived from it in respect to the future of the phase-down. Consideration is also

given to EPEE's priorities in regard to the other requirements in the Regulation, non-exhaustively including Training and Certification, and Recovery, Reuse and Recycling (RRR).

Modelling and the Phase-down:

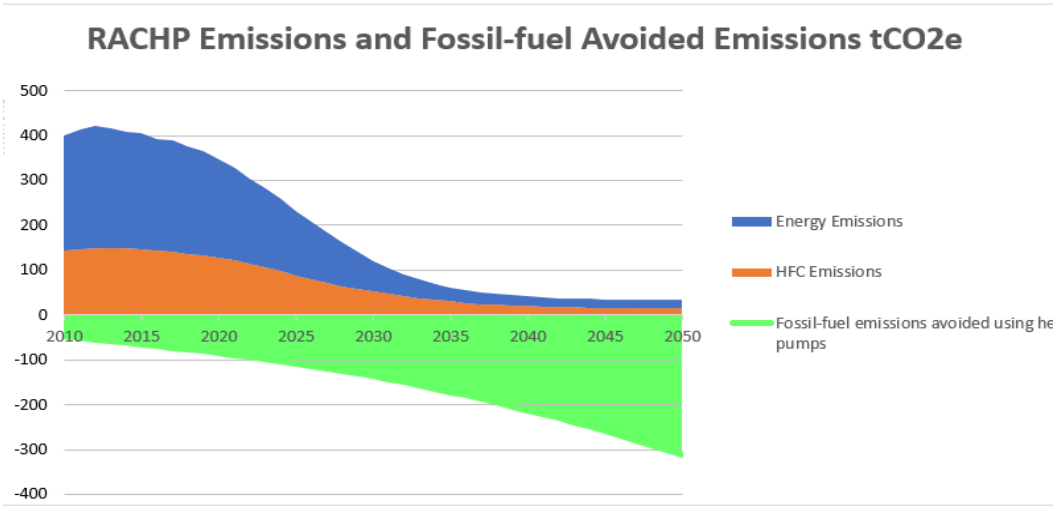
EPEE re-iterates its strong support for the HFC phase-down as the F-Gas Regulation's strongest and most successful instrument, achieving the highest total greenhouse gas emission reductions as part of the EU policy to combat climate change, in line with the international commitments at the global level. It provides the flexibility and predictability needed for industry to deliver the most energy efficient, safe and affordable solutions to achieve carbon neutrality by 2050.

As such the future of the phase-down must have as its foundation a model for the market for fluorinated gases that is sufficiently robust and granular. EPEE is concerned in relation to several elements of the AnaFgas model that are far from aligned with EPEE's internal modelling.

EPEE would like to emphasize what EPEE considers to be a major deficiency in the AnaFgas model: the failure to integrate the CO_2 abatement contribution of heat pumps as a heating technology. EPEE's modelling integrating energy parameters makes stronger and more realistic assumptions as to the contribution of heat pumps to decarbonisation of both heating and cooling. Indeed, roughly 80% of heating is currently still based on fossil fuels, and half of the total final energy consumption in the EU is related to heating and cooling. In other words, decarbonising heating is crucial to achieve the EU's climate and energy goals and heat pumps are a major solution in that respect.

Further, the estimations for the market size and growth forecast for heat pumps are anaemic. A wealth of strong data can be found in the preparatory studies for a number of Ecodesign measures. Background information that would make the estimations in the modelling significantly more robust.

Not fully accounting for the abatement potential from heat pumps in the modelling can be strongly misleading and comes with the major risk that the benefits of heat pumps are jeopardised due to restrictive refrigerant obligations. The following graph illustrates both the importance of addressing energy related refrigerant emissions and the enormous abatement potential of heat pumps.



Graph provided by Gluckman Consulting, during the preparation of the energy modelling, in May 2021.

Explanation:

- The blue part of the graph illustrates the "indirect" emissions related to energy use. The modelling takes into account the efficient design and operation of equipment as well as the decarbonisation of the grid. Assumptions are in line with Ecodesign studies where available.
- The orange part of the graph illustrates the "direct" emissions related to refrigerants . The modelling considers leakage reduction and refrigerant choice.
- The green part shows the abated emissions resulting from the transition from fossil fuel heating technologies to heat pumps.

Conclusions:

1. The efficient design and operation of equipment and the decarbonisation of the grid achieve nearly twice as much emission savings than the reduction achieved by leakage reduction and refrigerant choice.
2. Moving away from fossil fuel heating to heat pumps removes a further 300 million tonnes of CO_2-eq emissions by 2050. It should be noted that this is based on a very conservative estimate of the market penetration of heat pumps. The abatement potential could be significantly higher with a more widespread use. EPEE is currently adding further information to the modelling to better reflect this.
3. Jeopardising energy efficiency improvements and the uptake of heat pumps would therefore put at risk the entire decarbonisation of the sector and its indispensable contribution to achieving carbon neutrality in the EU.

In addition to this major concern, EPEE points to the joint industry position paper where EPEE, along with other associations, expresses strong concerns about granularity, refrigerant assumptions, lack of data and disregard of EU competitiveness (please refer to the Annex).

Indeed, taking the example of stationary air-conditioning and heat pumps, the AnaFgas model fails to clearly define what equipment provides heating, cooling or both, hydronic heat pumps seem to be missing, the distinction between split a/c and heat pumps is not clear, etc. As stated in the joint paper, refrigerant choice, lifetime assumptions, and other factors vary considerably depend on the application segments. Therefore, insufficient segmentation leads to premature and potentially misleading and unsubstantiated conclusions.

Other Requirements:

Aside from the expressed concerns on the modelling, EPEE would like to take this opportunity to strongly recommend strengthening key provisions such as the introduction of electronic logbooks, the extension of recovery, leakage control and record keeping, recycling and reclamation (RRR) as well as certification requirements to all types of refrigerants, and further improvements in the implementation and enforcement of the F-Gas Regulation.

Leakage control and record keeping were already key pillars of the first, 2006 F-Gas Regulation and they still are an important part of the 2014 F-Gas Regulation. Nevertheless, and despite the mandatory keeping of logbooks, there is still a lack of availability of fact-based data regarding leakage rates and recovery rates. Considering that leakage control has the triple benefit of reducing emissions, ensuring safety and maintaining energy efficiency, it is of key importance to better understand this important pillar of the F-Gas Regulation so that potential additional measures can be fact rather than merely assumption based.

Requirements on recovery, recycling, reclamation (RRR) of F-Gases have already been introduced in the 2006 F-Gas Regulation, these play a key role in reducing emissions and are fully in line with the objectives of circular economy. With the 2014 F-Gas Regulation, RRR schemes have become increasingly important as the HFC phase-down exerts increasing pressure on the availability of HFCs. However, currently there is no or only very little data available related to RRR of HFCs. A better understanding of RRR would be a first and essential step to assess avenues to boost RRR.

Training and certification of installers have also been part of the F-Gas Regulation since 2006 and represent a crucial element for its success in reducing emissions. With the introduction of the HFC phase-down and the need to transition to lower GWP refrigerants, it has become increasingly important for installers and service technicians to be able to safely handle flammable, high-pressure and toxic refrigerants, whether they are fluorinated or non-fluorinated gases. A uniform level of competence at EU level, as well as sufficient training opportunities and information at national level are essential to achieve this goal.

Penalties for infringements of the Regulation must be effective, proportionate and dissuasive. According to the 2014 F-Gas Regulation, Member States are required to lay down the rules on penalties applicable to infringements of this Regulation. However, experience has shown that several Member States took a long time – too long – to notify their penalty schemes to the European Commission. Moreover, penalty schemes differ widely between Member States. To ensure proper enforcement of the F-Gas Regulation, stringent and dissuasive penalty schemes remain a key factor for success. Therefore, the proposed policy option to introduce minimum penalties for non-compliance is a step in the right direction.

Annex: Joint Statement agreed with other European and national industry representatives and EPEE's previous submissions to the F-Gas Regulation review process

- Joint Statement on F-Gas Regulation review Stakeholder Workshop
- EPEE Position Paper EU F-Gas Regulation Inception Impact Assessment - 4 September 2020
- EPEE Position Paper EU F-Gas Regulation - 23 December 2020

Further documents, including Öko-Recherche Interview Responses of March 2021, and Open Public Consultation Response EU F-Gas Regulation review are available upon request.

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About EPEE

The European Partnership for Energy and the Environment (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 realize 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.