

EPEE POSITION PAPER – TOWARDS COPENHAGEN

The European Partnership for Energy and the Environment (EPEE) welcomes the European Commission's communication "Towards a comprehensive climate change agreement in Copenhagen"¹. In committing itself unilaterally to an emission reduction target by the year 2020 of 20% vs. the 1990 baseline, the European Union has clearly shown its ambition to demonstrate its leadership in the upcoming negotiations for a successor to the Kyoto Protocol. A 30% reduction goal as proposed by the Commission will be very challenging and require substantial innovation. In this respect, the Commission proposals on fluorinated greenhouse gases must be considered in a broader context.

As the representative organisation of the Refrigeration, Air Conditioning and Heat Pump Industry in the EU, EPEE stresses that further reductions in overall Greenhouse gas emissions are to a large extent dependent on the energy consumed. The challenge for its members is to increase the performance of their equipment. In particular, a wider use of heat pumps can greatly reduce CO₂ emissions from heating and greatly reduce the EU's dependency on fossil fuels for heating purposes.

EPEE members need access to a wide variety of refrigerants to deliver the energy efficiency needed to meet the EU's ambitious targets. At the same time, the equipment used must not compromise the high safety standards that the general public has come to expect. In many cases, the use of toxic (ammonia), flammable (hydrocarbons) or high pressure (CO₂) fluids cannot deliver the safety levels at the efficiency needed to achieve the greenhouse gas reduction targets. In those cases, hydrofluorocarbons or HFCs, with zero ozone depletion potential, are the refrigerant and heat transfer fluid of choice.

As stated in the Commission's communication, HFCs have a substantial Global Warming Potential. It must be noted however, that the GWP of HFCs is in many cases substantially lower than that of Ozone Depleting Substances² they replace and lower GWP HFCs are being developed. The Commission further asserts that "the accelerated phase-out of HCFCs over the coming decade under the Montreal Protocol may lead to a rapid increase in HFC emissions", and proposes an international reduction arrangement for HFC

¹ COM (2009) 39 final, Brussels 28.1.2009

² CFC-12, the most commonly used CFC has a GWP of 10'900; HCFC-22 a GWP of 1810 and HFC-134a a GWP of 1430 (IPCC 4th Assessment Report).

emissions in the context of the Copenhagen negotiations. It is also important to note that the UNFCCC process focuses on emission reductions, and not, as is the case of the Montreal Protocol, the elimination of a class of compounds. The UNFCCC approach is a recognition of the interdependencies between the various categories of substances.

While EPEE is supportive of any instrument that encourages the minimisation of HFC-emissions, it is important to place such a goal in context:

- Well designed, manufactured and properly maintained (by qualified personnel) refrigeration and air conditioning equipment are users and not consumers of refrigerants.
- As noted, Ozone Depleting Substances which are still widely used, also have a substantial GWP, so any arrangement must take emissions of these substances into account. As a result, we would expect an overall decline in direct CO₂-equivalent emissions of fluorocarbons;
- HFC-based equipment will contribute to lower energy consumption as the equipment will embody the latest energy efficient technologies, the CO₂-emissions prevented over the useful life of the equipment used must be taken into consideration – this is usually referred to as Total Equivalent Warming Impact – TEWI³;
- The latest HFC equipment designs show a trend towards lower refrigerant charge for same capacity equipment operating on HCFCs, it is therefore incorrect to assume a 1:1 replacement;
- Industry made, and will continue to make, significant progress in the design and manufacturing of much tighter systems with very low or even zero leakage rates. As a result, under normal conditions of use, HFC-emissions per unit will decline over time. In this context, we refer to the philosophy of the EU F-Gas Regulation (842/2006) which focuses on containment and emission prevention;
- Similarly, the Ecodesign requirements for Energy Using Equipment (Directive 2005/32/EC) will force manufacturers to improve the total performance of their products;
- Proper training and qualification of personnel handling these fluids as mandated under the EU F-Gas regulation will make a substantial contribution to emission prevention.

³ A more sophisticated approach is available through the Life Cycle Climate Performance which extends the scope to the entire lifecycle.

- Unlike the other mainstream GHGs which are a by-product from other primary processes, HFCs are produced to meet a societal need.
- Direct HFC-emissions in the EU (and globally) represent less than 2% of overall GHG emissions. Whilst their emissions must be prevented using best available technologies – eliminating them completely will have a very limited effect on Climate Change. Moreover, their atmospheric lifetime (in most cases 10 – 50 years vs. several centuries for CO₂) suggests that they have a limited long term impact.
- Similarly, the environmental impact of other zero or low GWP alternatives must be taken into consideration (Photochemical Ozone Creation Potential, acidification, etc.)

The accelerated phase-out of HCFCs in the EU has been made possible by virtue of the availability of HFCs. Any international emission reduction arrangement must recognise this basic reality, as investment decisions have been taken for a 12 to 20 year time horizon. In our view, it is better to invest in improving the tightness of existing equipment than in the replacement of the fluids.

EPEE recognises that technological progress will be able to deliver fluorinated compounds with lower GWP-values. We would welcome an arrangement that indeed encourages the industry to step up innovation in the area, keeping in mind that it should not come at the expense of the energy efficiency of the equipment and acknowledging the long economic life of some equipment.

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