

EPEE Position Paper on HFC Control Proposals May 2009

The European Partnership for Energy and the Environment (EPEE) represents the Refrigeration, Air-Conditioning and Heat Pump sector in Europe. Its members include the manufacturers of equipment, the installation and servicing sector, as well as the producers of refrigeration and heat transfer fluids. EPEE's mission is to promote the efficient use of energy in the sector as well as refrigerant choice. In this context, EPEE is a strong supporter of the EU F-Gas Regulation which focuses on the responsible use of fluids and emission prevention.

EPEE members use a variety of fluids, including HFCs. In many applications HFCs are the refrigerant of choice because of their intrinsic properties. They are chemically stable, non-corrosive, non-flammable, have a good (eco)toxicity profile, operate at acceptable working pressures, and have an insignificant POCP¹, while enabling high energy efficiency.

Current alternatives to HFCs have certain disadvantages in terms of less (than HFCs) energy efficiency, safety, life cycle climate performance or cost, depending on the applications. In many cases, important additional cost must be incurred to meet these concerns, thus increasing the total cost of ownership.

EPEE recognises that HFCs currently in use² have relatively high Global Warming Potentials compared to CO₂. It must, however, be recognised that, contrary to other Greenhouse Gases which are waste by-products, HFCs are produced to meet legitimate societal needs. In addition, HFCs can only achieve their GWP if released in the atmosphere through leakages. The F-Gas Regulation addresses this issue and its measures (e.g. higher standards for installation and maintenance of RAC equipments) will contribute to preventing HFCs from achieving their GWP. Moreover, HFCs are specifically designed to provide optimal, energy efficient performance in targeted applications. Heat pumps, classified as a renewable energy technology, are a classic example insofar as they rely on HFCs to achieve their high energy performance level. As a result, HFC-based equipment contributes to a substantial reduction of power consumption, and thereby CO₂-(indirect) emissions associated with the production of electricity. It is generally accepted that these indirect emissions are the major source of the Greenhouse impact from operating HFC-based equipment. The relative importance of these indirect emissions is likely to further increase as equipment designs and refrigerant containment practices continue to improve.

¹ Photochemical Ozone Creation Potential – an indicator of the potential contribution to ground level ozone, or “smog”

² At present a new group of fluorocarbons, hydrofluoro-olefins or HFOs, is being introduced. These HFOs have a much lower GWP and are not covered under the term HFC for the purpose of this paper

EPEE has taken note of the proposal from the Federated States of Micronesia and Mauritius to introduce controls on the quantity of HFCs that can be produced and placed on the market³. Moreover, EPEE is aware of discussion in the U.S. Congress to bring HFCs under a Cap & Trading system domestically. In the context of the Copenhagen UNFCCC COP, the European Union has indicated that “the accelerated phase-out of HCFCs over the coming decade under the Montreal Protocol *may*⁴ lead to a rapid increase in HFC emissions, many of which are very potent GHGs. Part of the Copenhagen agreement should include an international emission reduction arrangement for HFC emissions. This will encourage industry to step up intensified research into and development of HFCs with low global warming potential and HFC-free alternatives.”⁵

In view of these discussions and the particular emphasis given to F-gases, it is therefore appropriate for EPEE to start developing a position on supply controls that may be considered by decision makers for HFCs as a means of achieving a reduction of HFC-emissions. In the context of the many uncertainties that still must be addressed, we herewith provide our

Guiding Principles:

- The use of market-based instruments is critical to designing cost-effective regulatory frameworks, as they give market operators the necessary flexibility to find the most cost-effective ways to reduce emissions.
- Any effort to control HFCs should not be prejudicial to the agreed phase-out schedule for HCFCs;
- Any effort to control HFCs should not be prejudicial to the energy efficiency of the equipment relying on HFCs or alternatives;
- A global arrangement is preferable to a multitude of regional arrangements. A fragmented approach would complicate implementation, and may lead to poorer results. Industry is increasingly moving toward global standards and global solutions;
- Particular attention should be given to so-called embedded exports/imports (equipment and articles containing controlled substances);
- No concessions to the health and safety of the users and general public;
- No concessions to other environmental aspects, not just climate change;

³ UNEP/OzL.Pro.WG.1/29/8

⁴ Italics added by EPEE to stress the uncertainty associated with the predicted increase in emissions.

⁵ COM (2009) 39

- Recovered, recycled and reclaimed HFCs should be exempt from any control measure. The re-use of HFCs is a critical condition to achieve long-term sustainability;
- Credits for destruction of CFCs, HCFCs and HFCs must be available;
- The overall goal is emission prevention – any system must be flexible enough to accommodate improvements in containment. The relationship between supply and emissions cannot be considered to be static;
- On a global scale, aggregate use emissions of HCFCs⁶ and HFCs in CO₂-equivalent should constitute the baseline. Many countries are in a critical transition phase;
- The total environmental footprint of equipment should be taken into consideration. (TEWI and LCCP concepts⁷);
- Effectiveness of measures should be evaluated in terms of cost per tonne of CO₂ emission prevented;
- To the extent that the production and supply of HFCs is controlled, emissions of these HFCs should be exempt from any global Emission Trading Scheme;
- Legal certainty – avoid that the rules change every few years, which would cause a substantial increase in the economic burden of adjustment.

In summary any arrangement should spur investment in new environmentally effective, energy efficient and safe technologies that will improve the overall performance characteristics and functionality of equipment using refrigerant. The refrigerant can not be considered in isolation.

In general, EPEE takes the view that the total emissions associated with the use of HCFCs and HFCs in equipment (including the indirect emissions) should be in line with the overall agreed emission reduction schedule for all GHGs.

EPEE looks forward to a constructive dialogue with the Regulators and stakeholders and will further develop its position in view of the available data and of the arguments and views expressed.

⁶ HCFCs are Ozone Depleting Substances regulated under the Montreal Protocol

⁷ TEWI – Total Equivalent warming Impact, LCCP – Life Cycle Climate Performance