



The introduction of a mandatory HFC “cap and allocation” system: EFCTC’s observations

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BACKGROUND

The European Commission is currently reviewing the measures under the F-gas regulation (842/2006). One of the options under consideration is an HFC “cap-and-allocation” system. EFCTC has assessed the implications of such potential future legislation and has the following observations:

The Council of Ministers has agreed a target to reduce emissions of all Greenhouse Gases by 20% by 2020¹ and is currently discussing strengthening this target to 30% by 2020. It is recognised that industries that use HFCs will have to contribute to delivering this target. It should be noted that the Commission has stated publicly that the F-Gas Regulation and Directive were constructed for the emission reduction target of 8% for the first commitment period and that this will not be sufficient for the medium term. It is also important to continue to improve energy efficiency.

HFCs contribute to a wide range of societal benefits (for example, refrigeration and thermal insulation) where they have a direct influence on energy usage and can present significant advantages in terms of energy efficiency over other technologies. As a result, the needs of environmental protection will be best served by a managed reduction, which should encourage more efficient use of HFCs, through for example lower charge size, lower leakage, and lower GWP. Outright bans on particular end-uses are likely to be sub-optimal in this respect, because they tend to focus on a single aspect of a complex technical challenge, at a single moment in time.

To enable a flexible, long term solution, it is expected that a package of measures would be required that could include, among others:

- measures to reduce demand, such as leakage controls acting on the end-users, or charge size reduction initiatives;
- an industry-led reclamation, recycling and destruction initiative; and
- development of new compounds and new engineering solutions allowing a timescale to maintain or improve energy efficiency.

¹ Greenhouse Gases comprise: carbon dioxide (CO₂), methane, nitrous oxide (N₂O), and F-gases - HFCs, PFCs and SF₆. This percentage can rise to 30% if there is a substantial international agreement on emission reduction.

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EFCTC has examined the effect of reducing the availability of HFCs by a scheme to cap the quantities, as CO₂ equivalent, placed on the market² in the EU. This could be a mechanism to reduce demand in a transparent manner. EFCTC member companies would decide individually how to organise their own market strategies.

OBSERVATIONS

(i) Influence on HFC Emissions

The F-Gas Regulation (EC 842/2006) is designed to reduce emissions by improving containment of HFCs in refrigeration and air conditioning systems and the F-Gas Directive (2006/40/EC) will reduce emissions by, effectively, phasing out the use of HFCs in mobile air conditioning. It is worthwhile emphasising that mobile air-conditioning is a single application and relatively homogeneous in contrast to stationary refrigeration and air-conditioning.

The effect of freezing and then reducing the quantity of HFC³ that is available to meet consumers' requirements would be to limit the availability of high GWP HFCs. This would assist the F-Gas Regulation to reduce emissions by:

- making containment in existing equipment more economically advantageous (from the points of view of both the cost of replacing lost fluid and collateral business losses if replacement fluid cannot be obtained);
- driving towards better designed and assembled systems which would reduce leakage rates;
- driving towards reduced charge size initiatives which optimise the use of HFCs and reduce leakage in the event of major failure or at end-of-life;
- enabling the continued choice of the most appropriate refrigerant to maintain and improve energy efficiency while new lower GWP solutions are optimised;
- promoting the development of new fluids that retain the beneficial properties of HFCs but have lower GWP;
- providing increased incentive for the service sector to maintain equipment as well as recover and recycle fluids both during; and
- augmenting and possibly mandating schemes to recover and reclaim or destroy HFCs at the end of the operating life of equipment.

(ii) Envisaged HFC Cap & Allocate Administrative Burden

The envisaged system for an HFC Cap & Phase Down system is much lighter from an administrative point of view and will not require any of the elaborate trade controls from the EU ODS Regulation to be successful.

² In the interests of brevity, "placed on the market" is referred to as "sales".

³ EFCTC proposes a cap on HFC sales only, excluding PFCs and SF₆

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The cost of administration and enforcement can be borne by the economic operators involved. The first principle is that the system is not substance specific, i.e. all accounting is in terms CO₂-equivalent (CO₂-eq) or GWP-weighted. The substances covered are HFCs listed in Annex I of the F-Gas Regulation.

Since consumption is defined as Production plus Imports minus Exports, separate production controls are superfluous. It is therefore recommended not to have a dual set of controls, but focus uniquely on Consumption. This will allow maximum flexibility in sourcing the substances from the most efficient production facilities, minimising the environmental footprint.

Consumption Allowances, if implemented in a similar manner to EU ODS Regulations, could be issued to producers and other economic operators that import and/or export HFCs⁴ in a single Commission decision, based on verified sales data⁵.

Once these allowances have been set, no additional control measures are necessary. Each economic operator must not exceed its allowances in any single calendar year, and would be required to have an independent audit and subject to penalties that are dissuasive (in accordance with the F-gas Regulation). The EU ETS provides a good example of the use of independent auditors for compliance purposes.

Overall Compliance: the annual operating cost could be self-funding by an annual fee related to the allowances of each operator. To that effect, a not-for-profit trust could be created in which the Commission has a blocking vote. The trust would appoint an overall auditor with a time-limited mandate (e.g. three-consecutive years) to oversee all data collection and monitor annual performance. The not-for-profit trust could require a consultant to undertake an annual survey to establish the net import/export of HFCs in pre-charged equipment to understand their impact on the EU market.

Coverage: the system would be mandatory for all economic operators that produce or import HFCs on their own (i.e. in containers such as cylinders, drums, large tanks) in quantities greater than 1 metric tonne (not GWP-weighted, but aggregated) per annum. Export reporting, for economic operators that only export, could continue as at present under the existing F-Gas Regulation, to ensure that there is accurate reporting of net sales.

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⁴ Net Exporters will earn transferable Credit allowances.

⁵ As in the ODS Regulation, so-called co-producer sales and purchases are exempt.

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