



EU regulatory approach to the management of banks of ozone depleting substances and fluorinated greenhouse gases

1. Introduction

Decision XX/7(5) on the environmentally sound management of banks of ozone-depleting substances encourages Parties to develop or consider improvements in national or regional strategies for the management of banks, and invites Parties to submit their strategies to the Ozone Secretariat, for the purpose of sharing information and experiences.

This paper summarises the current legislation and regulatory approach adopted at EU level for the management of banks of ozone-depleting substances and fluorinated greenhouse gases.

2. Relevant EU requirements

The current EU legislation relating to banks which is summarised below applies in the 27 Member States of the EU. In some cases Member States have also adopted additional requirements which apply at national level.

2.1 Preventing leaks and emissions

- The legislation on *ozone-depleting substances* (ODS Regulation (EC) No 1005/2009) requires equipment operators to take *all precautionary measures practicable* to prevent and minimise any leakage and emissions of ODS. Operators must ensure that stationary equipment (RAC, heat pumps and fire systems) which contain ODS are checked for leaks; the frequency of checks depends on the size of the gas charge. Any detected leak must be repaired within 14 days, and checked again to ensure that the repair was effective. ODS must also be recovered for destruction, recycling or reclamation during the maintenance or servicing of the following equipment: RAC equipment, heat pumps, equipment containing solvents, fire protection systems and fire extinguishers.¹
- The legislation on *fluorinated greenhouse gases* (F-gas Regulation (EC) No 842/2006) requires operators of stationary equipment (RAC, heat pumps, fire systems) which contain regulated F-gases to prevent leakage and as soon as possible repair any detected leaks, using all measures which are technically feasible and do not entail disproportionate cost. Operators must also ensure that such equipment is checked for leaks by certified personnel; the frequency of checks depends on the size of the gas charge.² Related legislation set additional leak check requirements for stationary equipment that contains F-gases (RAC, heat pumps and fire systems).³ It also requires newly installed stationary

¹ Regulation (EC) No 1005/2009 on substances that deplete the ozone layer (recast), OJ L 286, 31.10.2009, p.1-30. Articles 22 and 23.

² Regulation (EC) No 842/2006 on certain fluorinated greenhouse gases, OJ L 161, 14.6.2006, p.1-11. Articles 3 and 4.

³ Commission Regulation (EC) No 1516/2007 establishing standard leakage checking requirements for stationary refrigeration, air conditioning and heat pump equipment containing certain fluorinated greenhouse gases, OJ 335, 20.12.2007, p.10-12. Article 10.

equipment to be checked for leaks immediately after being put into service.⁴ Recovery of F-gases is required during servicing and maintenance, for the purpose of recycling, reclamation or destruction.

- **Labelling and warning statements for users:** The chemical classification and labelling legislation (Regulation (EC) No 1272/2008) classifies ODS as hazardous substances; they must be labelled with the warning: '*Danger: hazardous to the ozone layer*'. ODS are also required to be labelled with the statement '*Avoid release to the environment*' and a precautionary statement about disposal.⁵ F-gas labelling regulations (Regulation (EC) No 1494/2007) require equipment containing F-gases to be labelled with the type of gas, the gas charge (in kilograms) and the statement: '*contains fluorinated greenhouse gases covered by the Kyoto Protocol*'. RAC and heat pump equipment insulated with foam that has been blown with F-gases must carry a label with the following text: '*foam blown with fluorinated greenhouse gases*'.⁶

2.2 End-of-life recovery

- The legislation on **ozone-depleting substances** (ODS Regulation (EC) No 1005/2009): ODS must be recovered for destruction, recycling or reclamation before the dismantling or disposal of all RAC equipment, heat pumps, equipment containing solvents, fire protection systems and fire extinguishers. ODS contained in other types of products and equipment shall be recovered (for destruction, recycling or reclamation) if technically and economically feasible, or destroyed without prior recovery. ODS and products containing ODS can only be destroyed using an approved technology. EU Member States are required to take steps to promote the recovery, recycling, reclamation and destruction of ODS.⁷ The ODS Regulation also provides for the option to establish an Annex to that ODS Regulation listing additional products and equipment for which the recovery of ODS (or destruction of products/equipment without prior recovery of ODS) is considered technically and economically feasible, and therefore mandatory.⁸
- The legislation on **fluorinated greenhouse gases** (F-gas Regulation (EC) No 842/2006) established recovery requirements for F-gases in the following types of stationary equipment: RAC, heat pumps, equipment containing F-gas based solvents, fire protection systems and extinguishers. Before the final disposal of such equipment, operators are responsible for arranging the proper recovery of F-gases by certified personnel, to ensure their recycling, reclamation or destruction. F-gases contained in mobile equipment⁹ and other products and equipment must also be recovered in a similar manner, to the extent that it is technically feasible and does not entail disproportionate cost.¹⁰ However, other legislation on end-of-life vehicles sets some additional requirements (details below).

⁴ Commission Regulation (EC) No 1497/2007 establishing standard leakage checking requirements for stationary fire protection systems containing certain fluorinated greenhouse gases, OJ L 333, 19.12.2007, p.4-5. Article 7.

⁵ Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, Official Journal L 353, 31.12.2008, p.1-1355. Table 5.2 and Table 6.2.

⁶ Commission Regulation (EC) No 1494/2007 establishing the form of labels and additional labelling requirements as regards products and equipment containing certain fluorinated greenhouse gases, OJ 332, 18.12.2007, p. 25-26. Article 2.

⁷ Regulation (EC) No 1005/2009, Article 22.

⁸ Regulation (EC) No 1005/2009, Article 22(4).

⁹ Except for mobile equipment that is serving military operations, Article 4(3).

¹⁰ Regulation (EC) No 842/2006, Article 4.

- The ***End-of-Life Vehicles*** legislation (ELV Directive 2000/53/EC) requires national systems for the collection and dismantling of end-of-life vehicles. The Directive made vehicle manufacturers, importers and other economic operators responsible for the cost of collecting vehicles at end-of-life, with free ‘take-back’ for vehicle owners. ELVs must be transferred to authorised treatment facilities that hold permits. EU Member States must ensure that ELVs are treated according to certain standards. All AC system fluids (ODS and HFC refrigerants), oils and other hazardous substances must be removed and collected separately. Recovery targets for ELVs have also been set.¹¹
- The ***Waste Electrical and Electronic Equipment*** legislation (WEEE Directive 2002/96/EC) applies to waste household RAC appliances, medical freezers, automatic dispensers, and other specified equipment. The legislation established producer responsibility for such waste. Equipment producers must provide for the financing of collection, recovery, treatment and disposal of WEEE (historical household WEEE, for example, is financed by producers who exist in the market when the relevant costs occur, in proportion to their market share). In a number of cases, the purchasers of new equipment pay a recycling fee at the time of purchase. On disposal, appliance owners and distributors are allowed to return WEEE free-of charge. ODS and gases with a GWP above 15 (e.g. gases contained in foams and refrigeration circuits) must be extracted from separately-collected WEEE, and properly treated. ODS must be treated as required in the EU legislation on ODS. Various recovery targets and minimum standards have been set.¹²
- The general EU legislation on ***waste management*** (Directive 2008/98/EC¹³) established a framework for waste management, and encourages producer responsibility. Various categories of ODS are classified as waste or hazardous waste.¹⁴ For non-hazardous wastes, EU Member States are required to ensure that waste undergoes recovery operations to recover/recycle resources or to protect human health and the environment. Specific wastes are required to be collected separately, if practicable, so as to facilitate a specific treatment. In the case of hazardous waste, EU Member States must ensure that collection, transportation, treatment and disposal are carried out in a way that protects human health and the environment. Hazardous waste must not be mixed with other wastes. In future, by the year 2020, the legislation requires that at least 70% of construction and demolition waste (by weight) will be recovered; this requirement can have implications for construction foams.¹⁵

2.3 Import and export for recovery or destruction

- The legislation on ***ozone-depleting substances*** (ODS Regulation (EC) No 1005/2009) allows imports of ODS for destruction by approved technologies. It does not permit the export of ODS for destruction. The Regulation placed a general prohibition on the export

¹¹ Directive 2000/53/EC on end-of-life vehicles, OJ L 269, 21.10.2000, p.34, as amended. Articles 5, 6, 7, Annex I.

¹² Directive 2002/96/EC on waste electrical and electronic equipment, OJ L 37, 13.2.2003, p.24, as amended. Annexes 1A, 1B and II, Articles 5, 6, 7, 8, 9.

¹³ Directive 2008/98/EC on waste, OJ L 312, 22.11.2008, p.3. Articles 4, 10, 12, 13, 17 and 18.

¹⁴ The definition of waste in Regulation 1013/2006 (Article 1) includes substances the use of which has been banned by law – this applies to many categories of ODS in the EU. ODS are classified as hazardous substances under Regulation 1272/2008. Commission Decision 2000/532/EC establishing a list of wastes and hazardous wastes (OJ L 226, 6.9.2000, p3-24) identifies categories which may be relevant to ODS e.g. 14 04 01, 14 04 02, 16 01 04, 16 02 11, 17 06 02, 17 07 02, 20 01 23, and others.

¹⁵ It will most likely lead to an increase of selective deconstruction of buildings rather than demolition. This will, in turn, increase the likelihood of separate collection of ODS foams.

of ODS and the export of products and equipment that contain or rely on ODS. Exceptions are allowed for several items such as halons for critical uses, ODS to be used as feedstock, and HCFCs under specific circumstances.¹⁶

- The legislation on *waste shipments* (Regulation (EC) No 1013/2006) prohibits the export of EU waste for disposal, except to EFTA countries. CFCs and halons are classed as substances subject to the ‘amber’ prior notification system. CFCs, HCFCs, HFCs and halogenated solvents appear to be classified as hazardous waste which cannot be exported for recovery, except to OECD-Decision countries.¹⁷ However, in practice, ODS exports are limited because the ODS regulation allows only specified categories of ODS to be exported (e.g. halons for critical uses), and prohibits the export of ODS for destruction.

2.4 Decommissioning of equipment containing halons

- The legislation on *ozone-depleting substances* (ODS Regulation (EC) No 1005/2009) allows the placing on the market of halons for critical uses only by undertakings that are authorised by the competent authority of the Member State concerned to store halons for critical uses. Fire protection systems and fire extinguishers containing halons which are not any longer considered as critical uses shall be decommissioned.¹⁸ The revised Annex VI to the Regulation defines the remaining critical uses and end-dates for all uses, as of which those uses are not recognised as critical.

3. Destruction facilities

At least 23 commercial destruction facilities in the EU are able to destroy ODS and HFCs. Total ODS and F-gas destruction capacity in the EU is estimated to be approximately 145 000 – 225 000 tonnes.¹⁹

4. Legislative developments in the pipeline

At the present time (October 2010) a **review of the WEEE Directive** is underway, and a proposal for revised text has been published.²⁰ Within the ongoing review of this Directive, the European Commission has proposed to increase the focus on ODS and F-gases, especially with respect to separate collection of waste appliances and a possible target for the collection of cooling and freezing equipment.

A review *of the F-gas Regulation* is currently being undertaken to assess the impact of the relevant provisions on F-Gas emissions and other aspects of the legislation. A report based on the experience of the application of the Regulation is due to be published by the European Commission in 2011.²¹

¹⁶ Regulation (EC) No 1005/2009, Articles 15(2)(d) and 18(3)(h) on imports; Article 17 on exports.

¹⁷ Regulation (EC) No 1013/2006 on shipments of waste, OJ L 190, 12.7.2006, p. 1, as amended. Articles 34, Annex IV & V.

¹⁸ Regulation (EC) No 1005/2009, Articles 13.

¹⁹ ICF (2010) Identifying and Assessing Policy Options for Promoting the Recovery and Destruction of Ozone Depleting Substances (ODS) and Certain Fluorinated Greenhouse Gases (F-gases) Banked in Products and Equipment, May 2010, p. xiii.

²⁰ European Commission Proposal for a Directive of the European Parliament and of the Council on waste electrical and electronic equipment (WEEE) (recast), COM(2008) 810 final, 3 December 2008. Status of the legislative procedure:

<http://www.europarl.europa.eu/oeil/FindByProcnum.do?lang=2&procnum=COD/2008/0241>

²¹ Regulation (EC) No 842/2006, Article 10.