

## ANNEX 2/1

### ECCP WG Industry

#### Work item “Fluorinated Gases”

#### Detailed description

##### 1. Background

- The fluorinated gases (dubbed ‘new gases’) covered by the Kyoto Protocol comprise of **HFCs, PFCs and SF6**.
- The three new gases **represent 1.6% of the total EU-global warming emissions** (1995) according to official reports. Amongst those gases HFCs account for 1%, PFCs for 0.3% and SF6 for 0.3%.
- Fluorinated gas-emissions emerge from a **broad variety of applications**. It includes sectors like chemical industry (HCFC-22 manufacturing), refrigeration/air-conditioning, foam, aerosols, metered dosed inhalers (MDI), solvents, fire-fighting, aluminium industry, magnesium production, switch-gear, semi-conductors and a range of more specific uses (car-tyres, windows, sport-shoes).
- **Emissions occur during product life** (e.g. 62% of the total HFC emissions), product manufacturing (HFCs: 32%) and product disposal (HFCs 6%).
- **Indirect emission reduction** in the area of fluorinated gases should also be looked upon. A recent study<sup>1</sup> for DG Enterprise suggests a considerable potential to reduce greenhouse-gas-emissions indirectly through less energy intensity (and therefore less CO<sub>2</sub>-emissions).
- Under a business as usual scenario, **growth in emissions of fluorinated gases is expected** under the next decade.
- There is **no regulation yet** concerning limitation of emissions from fluorinated gases in the EU. At recent discussions with member states and other stakeholders (Luxembourg Workshop 1./2. February 2000) the whole range of policy instruments has been discussed. This includes regulatory measures (e.g. IPPC) as well as economic incentives (taxation/subsidies) and voluntary action by industry.
- For certain applications **stakeholders agree** upon the technical feasibility to reduce emissions. However there is **disagreement** for certain applications between industry, Member States and environmental organisations about the timing and the instrument to apply in order to obtain emission reductions.

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<sup>1</sup> Opportunities to minimise emissions of Hydrofluorocarbons (HFCs) from the European Union, prepared by March Consulting Group, UK, 1998

- Emission reductions can either be obtained via minimisation of emissions of fluorinated gases during manufacturing, product/equipment life and at end of life or by substitution. In some applications (e.g. MDI) no substitute is available and therefore technically and economically feasible **reduction measures vary between different applications.**

## 2. Objectives

The purpose of the ECCP is to identify and to develop all those elements of a European climate change strategy that are necessary for the implementation of the Kyoto Protocol as a basis for consideration of political decisions by the responsible Commissioner. The objective of the fluorinated gases subgroup is to develop the basis for a framework of an EU-policy to reduce emissions of fluorinated greenhouse gases in a cost-effective way.

In line with the ECCP, **specific objectives** of the subgroup fluorinated gases are:

- Identification of the most relevant applications that should be subject to common and co-ordinated policies concerning fluorinated gases.
- Elaboration of a proposal for cost-effective instruments for each of the investigated applications.

The expected result should take into account:

- Uncertainties in emission inventories and how to reduce these;
- Business as usual (BAU)-emission projections and (technical) prevention, limitation and/or reduction options;
- Reduction potential for the period 2008-2012, cost effectiveness, costs and benefits;
- Consequences for energy efficiency, health, safety and the phasing out of ozone depleting substances under the Montreal Protocol;
- Potential policy instruments of implementation, taking into account cost-effectiveness, feasibility, possible reinforcement and potential support by stakeholders;
- Possibilities for co-operation and common, co-ordinated or national approaches

## 3. Organisation

It should be decided first, which area of application will be subject to the meetings of this subgroup. As the fluorinated gases sector comprises of a great variety of different applications and processes, it is useful to assign each of the meetings of the sub-group to only a few applications. This ensures not only that the most important sectors will be covered it also enables representatives from industry and environmental NGO's to contribute according to their particular expertise. It does not seem feasible to find only one expert from industry and NGO's who will be able to contribute with a view to all subjects, investigated. Therefore revolving participation is preferable. Due to the limited time available it may be necessary to focus on certain sectors and gases.

**Criteria** for the choice of gases to be investigated should be:

- (a) Expected business as usual contribution to greenhouse gas emissions
- (b) Technical feasibility for emission reductions
- (c) Economical feasibility to reduce emissions (cost-effectiveness)
- (d) Political feasibility and enforceability

A stakeholder workshop on fluorinated gases, held at 1./2. February 2000 in Luxembourg provided an appropriate basis for the agenda and the work of this sub-group. At this Workshop the approach was to cluster the broad variety of applications of fluorinated gases, which lead to emissions. In accordance with the discussion in Luxembourg, possible clusters containing the different applications in separate meetings are <sup>2</sup>:

- Refrigeration and Air-Conditioning
- Thermal insulation foams
- Light industrial products (Aerosols, MDIs, solvents, fire-fighting) and industrial products (Aluminium, semi-conductors, magnesium, HCFC-production, switchgear and special uses {car tyres, windows...}).

This approach would ensure a more focussed discussion, as each meeting would address fewer applications.

Along the lines described above, the following sequence of meetings is conceivable: A kick-off meeting (with broad coverage of the subjects) can be followed by 3 technical meetings, each of those covering a very limited subject (to ensure technical expertise). In each of these meetings tasks should be assigned to participants with the view to prepare an interim report. The fifth meeting can then be dedicated to a broad review of the interim report. In the remaining meetings, the results from the assignments given to the experts in the first three technical meetings will be discussed and missing elements identified at the fifth meeting will be addressed. A final meeting should be dedicated to the final report (again broad coverage).

#### **4. Participants**

**Rapporteur:** R. Schulte-Braucks

1 **DG ENTR:** N.Theihs

1 **DG ENV:** M. Loprieno (ENV A2)

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<sup>2</sup> A detailed agenda will be drafted prior to each meeting. This should be done in close co-ordination with the external experts.

1 **DG RTD:** M. Douka / D. Gilliaert

2 **external experts:** EnviroMarch (R. Gluckmann or D. Yellen) and Ecofyss (J. Harnisch). Both of the Consultants from EnviroMarch and Ecofyss should continue to contribute jointly as they have jointly organised the Luxembourg Workshop.

Approx. 3 **industry representatives:** one permanent representative to ensure continuity and co-ordination (N. Campbell, Chairman EFCTC). Revolving participation for other industry representatives subject to the agenda of each meeting. For the Kick-off-meeting: in order to ensure a broad coverage of the interested sectors for the Kick-off meeting one from CEFIC (Mr. B. Jensen) and one from EUCRAR (European Consortium for the Responsible Application of Refrigerants (J.P. Huguet).

2 other **stakeholder-NGOs:** Climate Network Europe (Mr. J. Anderson), Greenpeace (W. Lohbeck or M. Raquet).

**Member States**, that have already expressed interest (participation subject to concrete agenda items):

- Leo Meyer (Department of the Environment, The Netherlands)
- Per Rosenqvist (Swedish EPA, Sweden) or J. Malm (Finnish EPA) or F Jensen (Danish EPA)
- Mrs. M. Nolan or P. Cullingham (Department of Environment, UK)
- C. Ewald (Ministry of Environment) and/or Mrs. P. Mahrenholz (German EPA) or Dr. Pieper (German Ministry of Economics)
- A. Mijares (Ministry of Industry and Energy, Spain) or Mr. Camponogaro (Ministry of the Environment, Italy) or P. Liberato (Ministry of the Environment, Portugal)

## 5. First Meeting

The first meeting for the sub-group fluorinated gases is scheduled for end of June 2000.