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# **EU F-Gases Regulation and MAC Directive**

**ECCP-1 Review - Brussels 1 March 2006  
DG Environment**



# F-Gases Regulation and Directive

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One proposal but two elements agreed on 31 January 2006

- **Regulation** for containment and recovery, use bans and prohibitions
- **Directive** for phase out of HFCs  $> 150$  GWP in mobile air-conditioning systems in motor vehicles



# Main elements of Regulation and Directive

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## Regulation

1. Ms can maintain or introduce stricter national measures, Article 95 or 175 of Treaty apply according to provisions of Regulation in question
2. Containment and recovery measures
3. Training and Certification
4. Data reporting requirements
5. Labelling provisions
6. Marketing prohibitions and use restrictions
7. MS may retain stricter national marketing restrictions existing on 31.12.05 for four years after entry into force

## Directive

8. Prohibition on HFCs > 150 GWP in Mobile Air Conditioning in motor vehicles
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# Legal Base of Regulation and Directive

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- **Directive** on MACs :Article 95 of EC Treaty
- **Regulation:** a dual Legal base
  - Containment, Recovery, Certification and Reporting under Article 175 of EC Treaty
  - Use bans, prohibitions and labelling under Article 95 of EC Treaty



# Scope of Regulation

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## **It covers:**

- Fluorinated greenhouse gases in Kyoto Protocol – HFCs, PFCs and SF<sub>6</sub>
- Applies to fluorinated gases listed in Annex I together with respective GWPs
- GWPs based on third assessment of IPCC
- Annex I can be reviewed and updated in the light revisions under Kyoto Protocol (Article 5(3))
- Preparations containing fluorinated greenhouse gases with a GWP < 150 not covered by provisions of the Regulation



# Containment

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- Applies to stationary applications in Article 3
- Obligation to minimise leakages and repair as soon as possible
- Frequency of inspection schedule
- Checking for leaks by certified personnel
- Leakage detectors defined, mandatory for applications > 300kg but fire protection systems have four years grace
- Operator defined, owner can be responsible for operator's role
- Checking for leakage defined
- Maintenance of records on inspections and servicing companies and personnel
- Commission to define standard inspection requirements and direct and indirect measuring methods of leakage detection in Committee
- ISO 14520 standard for fire protection units can meet inspection standard



# Recovery

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- Recovery an obligation for operators by certified personnel for refrigeration/ac/equipment containing F-gases based solvents fire protection systems and fire extinguishers and high voltage switchgear
- Recovery obligatory from refillable and non-refillable containers at end of life
- Recovery in other products and equipment if technically possible and not disproportionate cost (e.g. foams, mobile air conditioning and refrigeration equipment except if serving military operations and mobile air conditioning)
- Recovery to take place before final disposal or during servicing and maintenance
- MS to facilitate cross-border shipment of recovered F-gases



# Training and Certification

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- Commission to establish minimum requirements and mutual recognition for personnel involved in installation maintenance or servicing with respect to refrigeration, air-conditioning and fire protection also for recovery, including mobile refrigeration and a/c, F-gases containers and high-voltage switchgear
- Member States to establish or adjust their programmes to comply and notify Commission
- Commission to establish notification format
- Training and certification covers relevant personnel and companies and their relevant personnel
- Operators have an obligation to ensure personnel used are trained and certified
- Only certified personnel to take delivery of fluorinated ghg



# Data Reporting

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- Data reported to Commission for each calendar year on F-Gases
- Each producer – if production  $> 1$  tonne per annum and main applications of use
- Each importer – if imports  $> 1$  tonne per annum and main applications of use
- Each exporter – if exports  $> 1$  tonne per annum including for recycling, reclamation and destruction
- Commission to establish format of reporting
- Member States to establish reporting systems for sectors in Regulation for purposes of acquiring emission data



# Labelling

- Labelling applies to certain products and equipment containing fluorinated greenhouse gases – chemical name, using accepted industry nomenclature and indication it contains fluorinated greenhouse gases
- Applies, *inter alia*, to refrigeration equipment containing PFCs; refrigeration/air-conditioning/ fire protection systems and extinguishers containing HFCs and swichgear containing SF6
- Information required in instruction manual
- Commission with the committee shall establish the format of the label
- Commission to examine possibility 2 years after entry into force of adding additional environmental information, incl GWP, to label



# Placing on the Market Prohibitions

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- Small number of prohibitions in annex II
- A MS having stricter national provisions at 31.12.2005 on placing on the market of products and equipment containing F-Gases may keep these measures until 31.12. 2012
- MS to notify Commission with justification by the date of entry into force
- Commission to provide the Committee with relevant information on such measures



# Control of Use

<b>F-GAS</b>	<b>USE</b>	<b>DATE OF USE BAN</b>
SF6	Magnesium die-casting	One year after entry into force
SF6	Magnesium die-casting if use < 850 kg per year	1 January 2008
SF6	Filling vehicle tyres	One year after date of entry into force



# Review- 4 years after date of application

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- Review of refrigeration systems in modes of transport and air conditioning systems other than those in motor vehicles
- Assess need for further action in light of Kyoto and further international commitments
- Assess effectiveness of containment measures and see if maximum leakage rates possible
- Assess need for standards
- Evaluate training and certification programmes in MS
- Review reporting requirements
- Assess need for European standards for controlling emissions of fluorinated ghg
- Evaluate effectiveness of containment measures
- State of technology review and best available techniques and environmental practices
- Review of SF6 uses and possible revision of provisions in Regulation
- Assess need to change Community provisions on GWP of F-gases
- Assess whether other products and equipment can be included in Annex II - prohibitions



# Directive: Phase-out of HFC-134a

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- **Inform which refrigerant is used (*Art 4.2*)**
  - **Phase-out of HFC-134a will start on 1 January 2011 for all new models (*Art 5.4*)**
  - **From 1 January 2017 no new vehicle sold in the EU can use HFC-134a or any other Fluorinated gas with a global warming potential higher than 150 (*Art 5.5*)**
  - **Update of GWP according to IPCC (*Art 8.2*)**
  - **No loopholes**
    - **Retrofitting not allowed after 1 January 2011 (*Art 6.1*)**
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## Directive:

# Containment of MACs with HFC-134a

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- **No « gas and go » for existing MACs (*Art 6.3*)**
- **Leakage rate after the test procedure has been approved (12 months for new models 24 months for all cars) (*Art 5.2 and 5.3*)**
  - less than 40 grams per year for single evaporator cars
  - less than 60 grams per year for dual evaporator cars
- **Directive covers also safety of MACs (*Art 7.4.(a)*)**



# Entry into Force

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## Regulation

Entry into force twenty days after the date of publication in OJ

Applies 12 months after date of entry into force

## Directive

Entry into force twenty days after the date of publication in OJ

Transposition of Directive into national laws 18 months after entry into force



# Estimated Effects of Regulation and Directive

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- **Applies to 25 Member States – 450 million people**
- **Emission reduction around 21 Mtonnes of CO<sub>2</sub> eq by 2012**
  - **15 Mtonnes of Co<sub>2</sub> eq: containment**
  - **6 Mtonnes of CO<sub>2</sub> eq: prohibitions and use bans**
- **2020 around 40-50 Mtonnes of CO<sub>2</sub> eq per annum with full benefits of phase out of HFC 134a in MACs**



# Conclusions

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- **Contributes to meeting Kyoto objectives**
- **Focus on containment and recovery in Regulation and phase-out in Directive**
- **Commission secured the environmental ambition of its proposal**
- **First step in regulating emissions of fluorinated greenhouse gases**



# Further information

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- **Commission Communication 2001**

[http://europa.eu.int/eur-lex/en/com/pdf/2001/com2001\\_0580en01.pdf](http://europa.eu.int/eur-lex/en/com/pdf/2001/com2001_0580en01.pdf)

- **Report of working group**

<http://europa.eu.int/comm/enterprise/chemicals/sustdev/fluorgases/gas1.pdf>

- **Industrial Emissions Unit web-site**

<http://europa.eu.int/comm/environment/climat/eccpl.htm#fluorinatedgases>

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