



EU Regulation on Certain Fluorinated Greenhouse Gases The Case of SF₆ - Latest Developments

**Peter Horrocks
European Commission (DG Environment)
SF₆ Conference: Scottsdale, Az USA
1-3 December 2004**



Overview

- Outline approach and key elements of Commission proposal on fluorinated gases
- Current situation in EU Council
- Next steps



Why a proposal to reduce emissions of fluorinated greenhouse gases ?

- Climate Change
- EU Kyoto commitments -8% reduction of GHG by 2010-2012 relative to 1990
- European Climate Change Programme (ECCP) to meet commitments
- Proposal on fluorinated gases part of ECCP



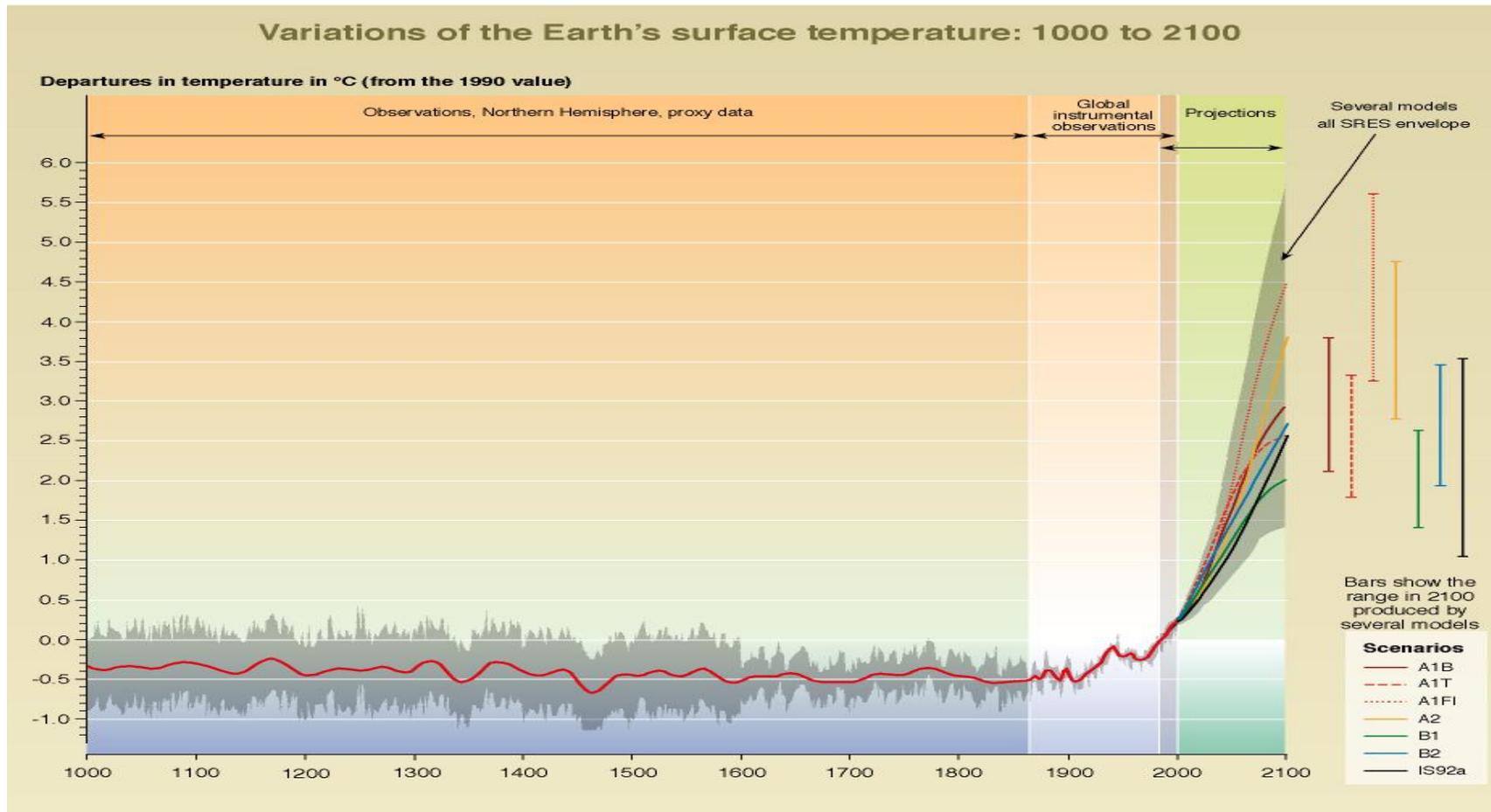
What is the problem?

Climate Change



By 2100: global temperature will rise by 1.4 – 5.8 ° C and 2 – 6.3 ° C in Europe (EEA, 2004)

FIGURE 9.2
SPM - 10b

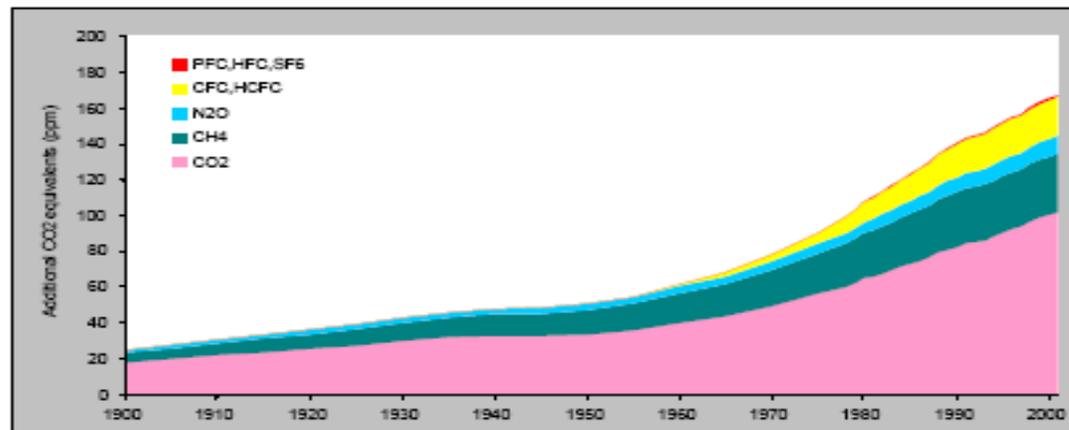




What is the source of the problem?

Greenhouse gas concentration

- Concentration of CO₂ has increased by 95 ppm (34%) to 375 ppm (global + Europe)
- All greenhouse gases rose by 170 ppm CO₂-equivalent (61% CO₂, 19% methane, 13% CFCs and HCFCs, and 6% N₂O)



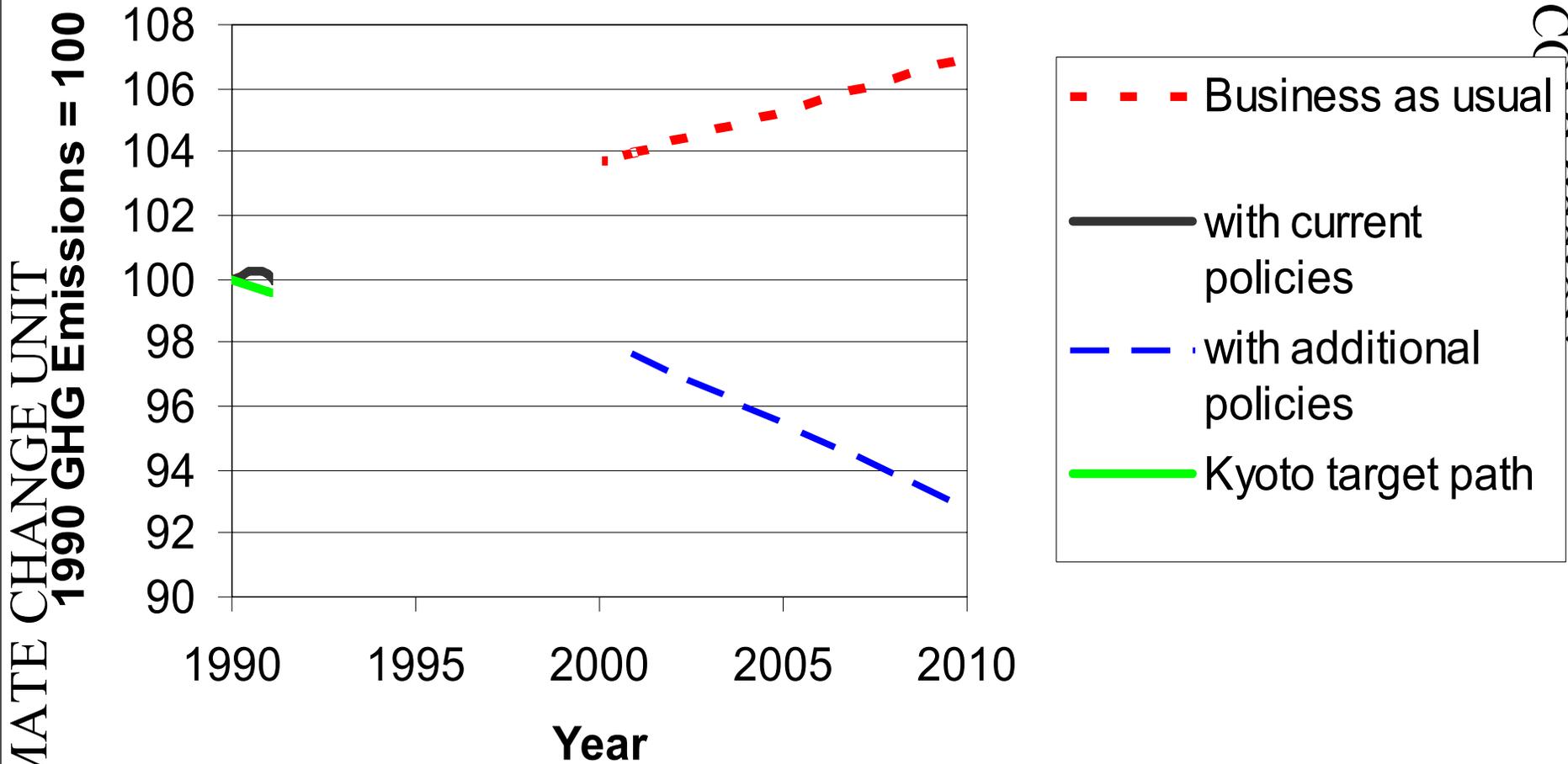
Rise of greenhouse gases (1900–2000) compared to the year 1750

- Increase to 650 - 1215 ppm CO₂-equivalent is projected by 2100

Data-sources: IPCC



The impact of policies and measures on predicted GHG emissions until 2010 as compared to 'business-as-usual' and the Kyoto target path in the EU





Why a Proposal?

Projected Fluorinated Greenhouse Gas Emissions

- EU emissions about 65 MTCO₂ eq in 1995 (2% of total EU emissions)
- Forecast to increase to around 98 MTCO₂ eq in 2010 (2-4% total EU emissions) under business as usual
- Increase mainly of HFCs explained by phase-out of ozone depleting substances in refrigeration/air conditioning sector
- SF₆ represents about 15% of total EU fluorinated greenhouse gas emissions



Approach

- Cost-effective legislative framework across EU
- Legal basis - Article 95 to ensure consistent policies for all economic enterprises and to protect EU internal market
- Subsidiarity and proportionality are important principles and the proposal takes into account national and sectoral circumstances



Main elements of Proposal

Commission proposal addresses 4 aspects:

1. Containment and recovery measures
2. Training and Certification
2. Data reporting requirements
3. Marketing and use restrictions



Political Agreement

- One proposal but two elements in Political Agreement of 14.10.2004
 - Regulation for containment, training and certification, use bans and prohibitions
 - Directive for phase out of HFCs > 150 GWP in mobile air conditioning systems in vehicles



Issues relevant to SF6

- Legal Base
- Recovery for high voltage switch gear
- Training and certification
- Labelling for switch gear
- Use bans – Magnesium die-casting and filling of vehicle tyres
- Prohibition of products containing SF6
- Review
- Entry into force



Legal Base

- Commission proposal based on Article 95 – Internal Market.

In Political Agreement for the Regulation

- Use bans and prohibitions under Article 95 (internal market)
- Other issues such as recovery and training and certification under Article 175 (environment provisions)



Recovery

- Recovery of SF6 an obligation for operators (owners) of high-voltage switch gear
- Responsible for ensuring recycling, reclamation and destruction of SF6
- Certified personnel to be used
- Recovery to take place before final disposal and when appropriate during servicing and maintenance



Training and Certification

- **Step one** - Commission to establish minimum requirements and mutual recognition of training programmes for personnel concerned by entry into force
- **Step two** - Member States to establish training and certification requirements on basis of Commission's minimum requirements one year after entry into force
- **Step three** - Only trained personnel to take delivery of SF6
- Training and certification covers relevant personnel and companies and their relevant personnel
- Operators have an obligation to ensure personnel used are trained and certified



Labelling

- Labelling of switchgear containing SF6 using accepted industry nomenclature and indication it contains fluorinated greenhouse gases
- Commission with the committee shall establish the format of the label to be used



Use Restrictions

Magnesium die- casting:

- Use of SF6 or preparations in magnesium die-casting prohibited from 1 January 2008
- Exemption for installations using below 850kg per annum
- *Integrated Pollution Prevention and Control Directive - BAT* on Non Ferrous sector indicates SO2 (see www.eippcb.jrc.es/)

Tyres

- Use of SF6 or preparations for filling vehicle tyres prohibited



Marketing Prohibitions on Products containing SF6

- Non-refillable containers - from entry into force
- Windows for domestic use - from entry into force; other windows one year after entry into force
- Footwear – from 1 July 2006
- Tyres - from entry into force
- One-component foams - from entry into force



Data reporting

- Data reported to Commission by importers, producers and exporter
- Quantities above one tonne
- Producers and importers to identify main categories of applications



Review

Assess within four years of entry into force

- Impact of measures on emissions
- Evaluate training and certification measures
- Assess need for standards
- Assess need for dissemination of notes on best available techniques and best environmental practice
- Include in assessment state of technology internationally and in EU
- **Assess whether SF6 in sand casting, permanent mould casting and high pressure die casting is technically feasible and revise use ban by 1.01.2009**
- **Review exemption of magnesium die casting below 800kg by 1.01.2010**
- Assess whether other products and equipment containing fluorinated gases can be prohibited



Estimated Effect

- Applies to 25 countries 450 million pop
- 2012 around 21 Mtonnes of CO2 eq
 - 15 Mtonnes of CO2 eq: containment
 - 6 Mtonnes of CO2 eq: prohibitions and use bans
- SF6 accounts for around a third of the 2012 reduction
- 2020 around 40-50 Mtonnes of CO2 eq per annum



Costs

- Containment and Recovery measures about 18 euro per tonne of CO₂ much lower for SF₆ since main concern is recovery
- Marketing and use restrictions less than one euro per tonne of CO₂
- Data reporting costs about 400.000 euro between 91 enterprises



Indicative Timetable of Commission Proposal on Fluorinated Gases

- 11 August - Commission approves Proposal COM(2003) 492 final
- Adoption by co-decision procedure
- 8 September 2003 - first examination by Council- to date 14 meetings
- European Parliament first reading 31.03.2004
- Council Debate for political approval: October 14 2004 followed by common position
- “Second reading” by mid 2005 (with new Parliament and under the Luxembourg or UK Presidency)
- Conciliation, *if necessary*, to finalise agreement by fall 2005 (UK Presidency)
- For the Directive two years for transposition enters into force in 2008
- For the Regulation entry into force one year after approval - end 2006



Deciding on the F-gas Regulation

EUROPEAN COMMISSION

European Commission

proposal

European Parliament

1st reading

2nd reading

Common position

Council (Member States)

2nd reading = Common Position?

Council and Parliament negotiate through "Conciliation" procedure

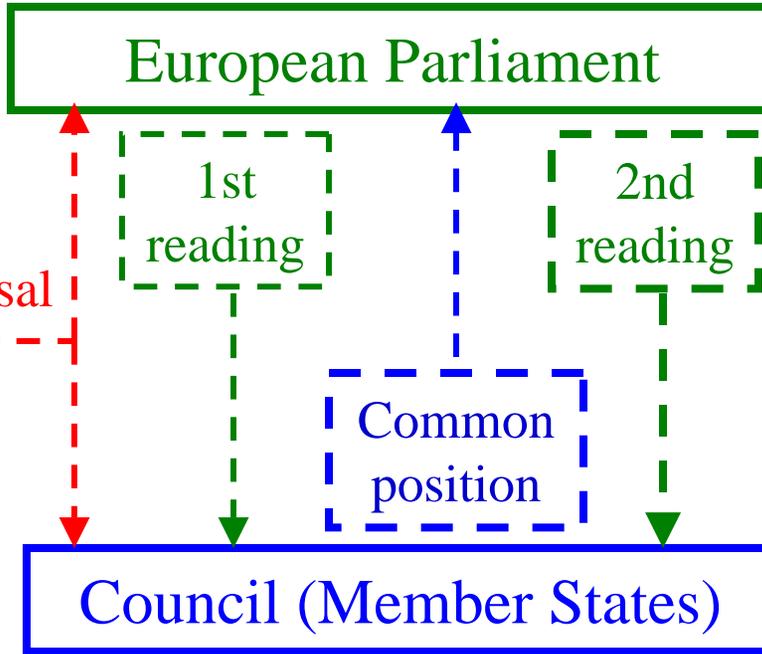
no

yes

Law

CLIMATE CHANGE UNIT

Note: It is possible to agree already during "1st reading"





Further information

- Commission Communication 2001
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>
- Climate Change Unit web-site
http://europa.eu.int/comm/environment/climat/home_en.htm

Contact
peter.horrocks@cec.eu.int



Thank you
for your attention