EUROPEAN COMMISSION

CLIMATE CHANGE UNIT

Phase-Out of HFCs in Vehicle Air Conditioning Systems in the largest car market of the world

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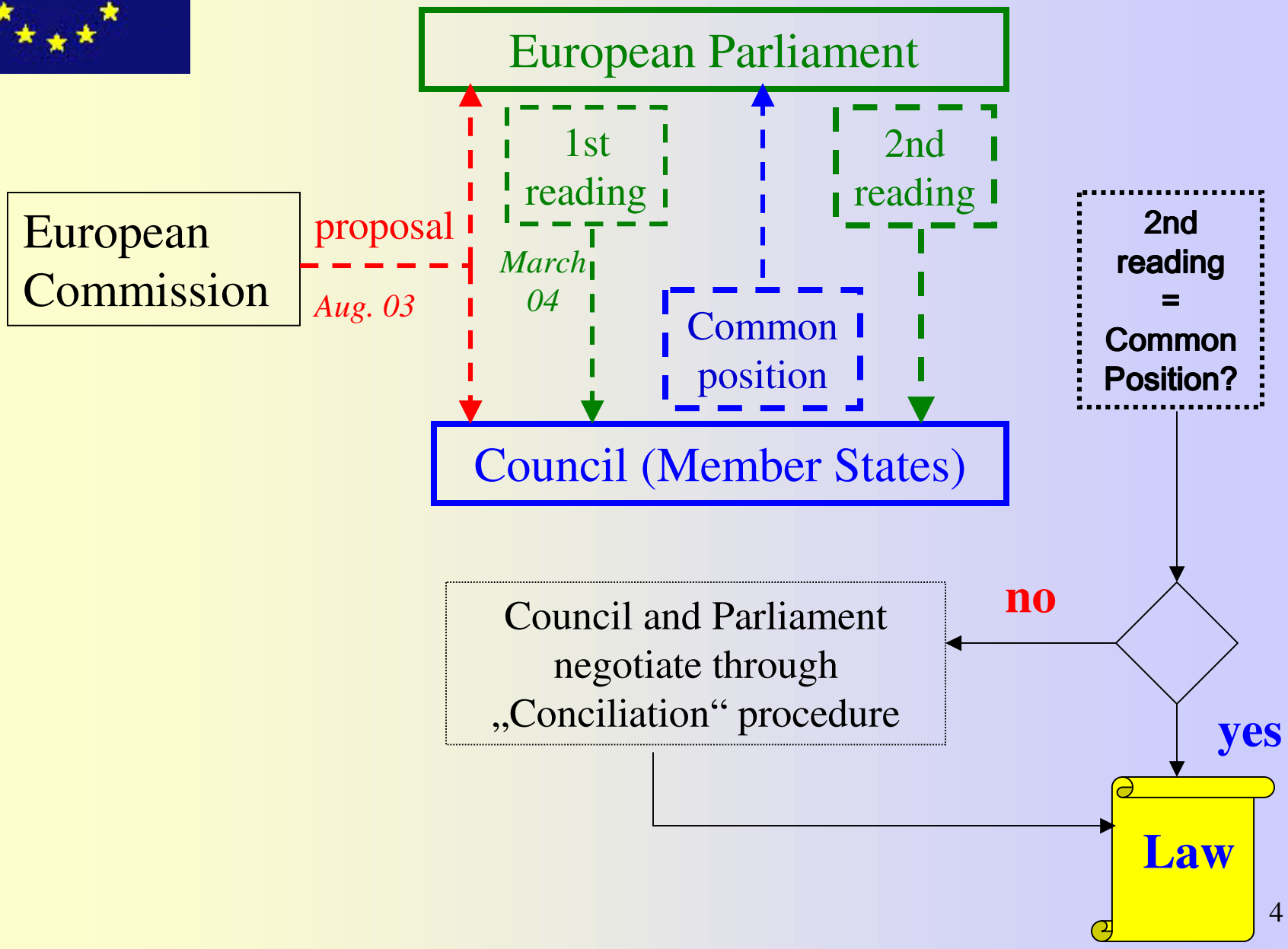
Outline

- Introduction
- Situation up to now
- Next steps
- Some implications to developing countries
- Conclusions

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 identified the reduction of fluorinated gases as a cost-effective measure

Deciding on the F-gas Regulation in EU



European Commission's Proposal 2003

- Based on extensive stakeholder consultation, including developing countries: See Conference **Options to Reduce Greenhouse Gas Emissions due to Mobile Air Conditioning** **(organised with US EPA) at**

  http://www.europa.eu.int/comm/environment/air/mac2003/index.htm
- Proposed phase-out 2009-2013 using a flexible system of transferable quotas
- Proposed to include HFC-152a
- Several technical requirements including leakage rate reduction up to2009.
- *Award from US EPA for "regulatory flexibility"*

European Parliament First Reading March 2004

- Agreed that phase-out of HFC-134a needed
  - Disagreed with the flexible quota system
  - Proposed it to be based in the vehicle "type approval" system (which is used for allowing placing cars on the market in the EU)
- Proposed to postponed dates to 2011-2014
- Wanted to exclude HFC-152a

Council's Political Agreement October 2004

- Agreed to phase-out of HFC-134a with the "type approval" system
- Proposed to change dates to 2011-2017
- Agreed on leakage requirement of HFC-134a
- Proposed to include HFC-152a (GWP <150)
- Made many technical amendments

Issues Relevant to MACs

- Harmonised leakage detection tests
  - In about 2008 (depending on entry into force) leakage rate of MACs needs to be
    - <40 grams per annum for single and
    - <60 grams for dual evaporator systems.

- Start and end of phase out
- Coverage – HFC 152a
- Review
- Entry into force
- Review five years after entry into force, possible application to commercial vehicles and buses

Commission Position on Common Position

- In general supports the Council's common position
- Supports the inclusion of HFC-152a
- Can support 2011 as start date of phase out
- End date of 2017 more practical

Next Steps

- Formal Adoption of Common Position in April 2005
- "Second reading" by Parliament by September 2005
- **Remaining issues**:
  - Will end date be 2014, 2015, 2016 or 2017?
  - Will HFC 152a be included or excluded as an option
- In the unlikely event of disagreement: "Conciliation" between Parliament and Council by the end of 2005
- **Entry into force in late 2007 or early 2008**

Effects

- Applies to the largest car market in the world
  - 17 million cars with 450 million people
  - Imports cars worth €60 billion every year
  - Exports cars worth €30 billion every year
- When fully implemented reduces fluorinated gas emissions by about 30 million tonnes of CO2 eq per annum

Implications to Developing Countries

- Exporters to the EU: need to meet the new requirements
  - "Type approval" system treats European and foreign produces equally!
- Importers of cars from the EU: standards are likely to change
  - Maintenance of alternative systems, in particular CO2, is an issue
- All international car companies likely to offer CO2 systems soon
  - CO2 is a low cost (non-patented) refrigerant
- It could be that others phase-out HFC-134a following the EU
- Strategic choices for car manufacturers!

Conclusions

- Phase out of HFC-134a in MACs in theEU contributes significantly to meeting EU Kyoto objectives
- The EU has the largest car market in the world it produces about 17 million vehicles
- Phase-out of HFC-134a will take start on 2011
  - About 2 million alternative MAC systems will enter EU market
  - After the completion of the phase-out over 15 million new alternative units will be in the market annually
- No leaky HFC-134a MAC systems allowed in the EU from about 2008 onwards

Conclusions (cont.)

- Some details (HFC-152a and end date) to be determined
- It is only a first step in regulating emissions of fluorinated greenhouse gases
  - Trucks and buses likely to follow
- Cars all need aftermarket servicing and reparations

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Are you ready?

Thank you for your attention!