European Commission

Enterprise and Industry
Directorate General

ADAC Workshop
Brussels, 5 April 2005

Car Emissions and Euro 5

Dr. Reinhard Schulte-Braucks
Head of Unit Automotive Industry
Enterprise and Industry Directorate-General
European Commission, Brussels

Agenda

- Rationale for tighter emission limits
- Process for establishing limit values
  - Clean Air For Europe (CAFE)
  - Review of costs and impact assessment
- Key issues for Euro 5
- Fuel quality review

Transport a high priority for the EU

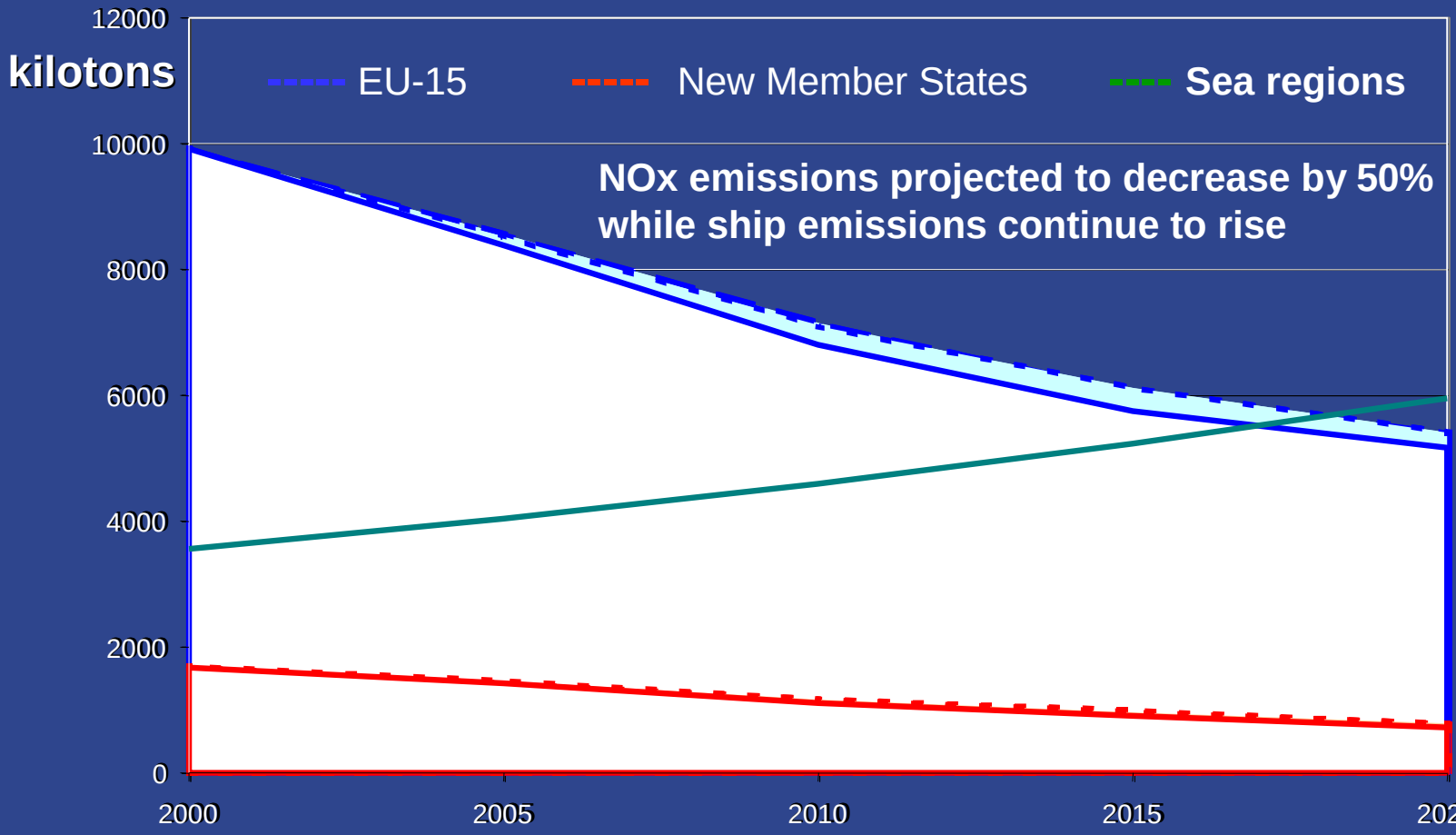
Key priorities:

- **Energy: limit climate change and increase use of clean energy**
- **Improve transport system**
- **Health and social policies**
- **Manage natural resources more responsibly**

Important contributor to air pollution

- Road transport is the largest contributor to NOx emissions in Europe and the second largest for PM10.
- By 2020, emissions of NOx and PM are forecast to go down even without further vehicle measures

Emissions of NOx are forecast to go down without further vehicle measures



Source: CAFE Baseline, RAINS (2004)

Health impact of air pollution

- Based on emission projections and latest advice from WHO it is evident that:
  - No safe level for human exposure to particulate matter
    - Smaller particles may be more damaging
  - No safe level for ozone effects
- Average life expectancy is currently shortened by about 9 months in the EU, in some Member States up to 1 to 2 years
- By 2020 average life expectancy is still forecast to be shortened by about 5 months

Clean Air For Europe (CAFÉ) Programme

- A programme of technical analysis and policy development which
- Aims to develop a long-term, strategic and integrated policy advice
- Will provide a cross-sectoral view of alternative measures to reduce air pollution
- Will help provide understanding of the **cost effectiveness** of further tightening vehicle emission limits
- Planned to be launched in May 2005

Light-duty vehicles regulation: current status

Directive 98/69/EC, since 1 January 2005: Euro-4

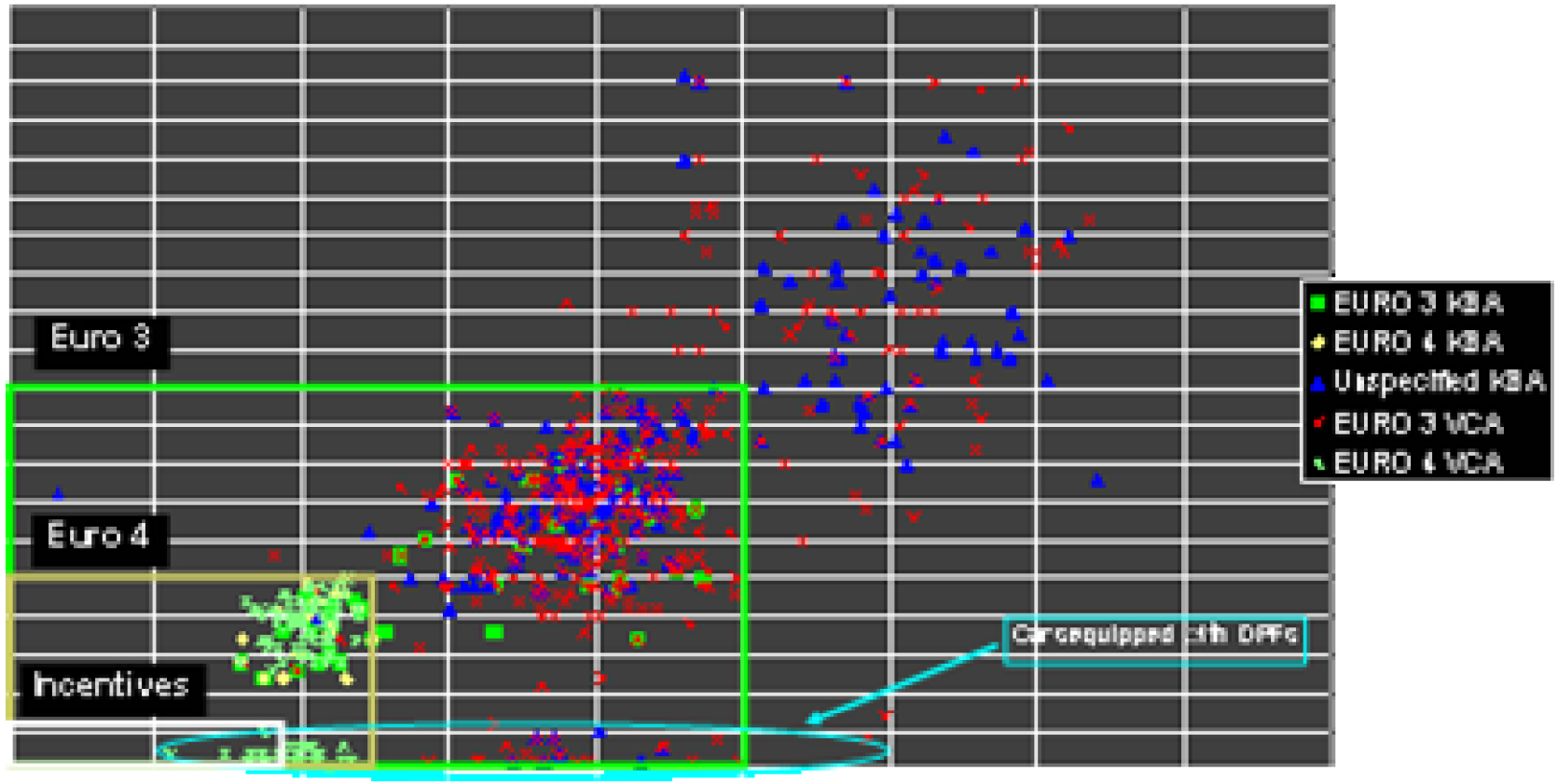
M1 petrol		CO (g/km)	HC (g/km)	NOx (g/km)
Euro-3	2000	2.3	0.2	0.15
Euro-4	2005	1.0	0.1	0.08

M1 diesel		CO (g/km)	NOx (g/km)	NOx + HC (g/km)	PM (g/km)
Euro-3	2000	0.64	0.5	0.56	0.05
Euro-4	2005	0.5	0.25	0.3	0.025

Euro-5: some key issues

- Particulate matter from diesel:
  - Mass reduction
  - Ultrafine PM
- NOx from diesel:
  - How much NOx reduction?
  - Means of achieving it
- Cost effectiveness
- For later: PM number counts (the UN-ECE PMP programme)

Diesel LDV: type approval data



Quality of petrol and diesel fuels

- Review by 31 December 2005 at the latest
- Issues:
  - New pollution abatement technologies
  - Metallic additives
  - Detergents and their role in the emission performance of vehicles
  - Full market application of diesel fuel with 10 mg/kg (ppm) sulphur by 2009
  - The introduction of biofuels
- Stakeholders have not identified further demands on fuel quality beyond 10ppm sulphur

Conclusions

- Vehicle emission standards are being driven by analysis of:
  - environmental need
  - technical feasibility
  - cost effectiveness
- Key issues for Euro 5 are emissions of PM and NOx, particularly from diesel cars
- A proposal is due shortly

The End