



# A view of the needs and potential of Euro VI for EU Air Quality

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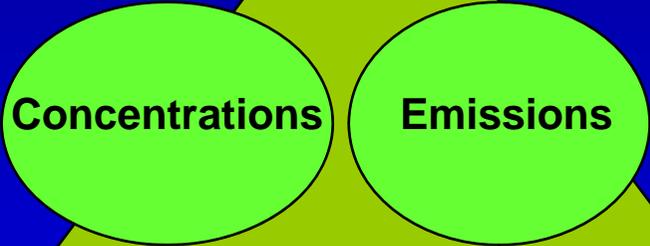
# Background Thematic Strategy

- 6th Environmental Action Programme  
(article 7.1) from 2002 :

***"...achieving levels of air quality that do not give rise to significant negative impacts on and risk to human health and the environment"***



# Air quality as we know it



Framework Directive

1<sup>st</sup> Daughter

National emissions ceilings

Stationary sources

Mobile Sources

2<sup>nd</sup> Daughter

3<sup>rd</sup> Daughter

IPPC

LCP's

Incineration

VOC's

4<sup>th</sup> Daughter

Non-road  
Tractors

Fuel Quality

Road

Exchange Information

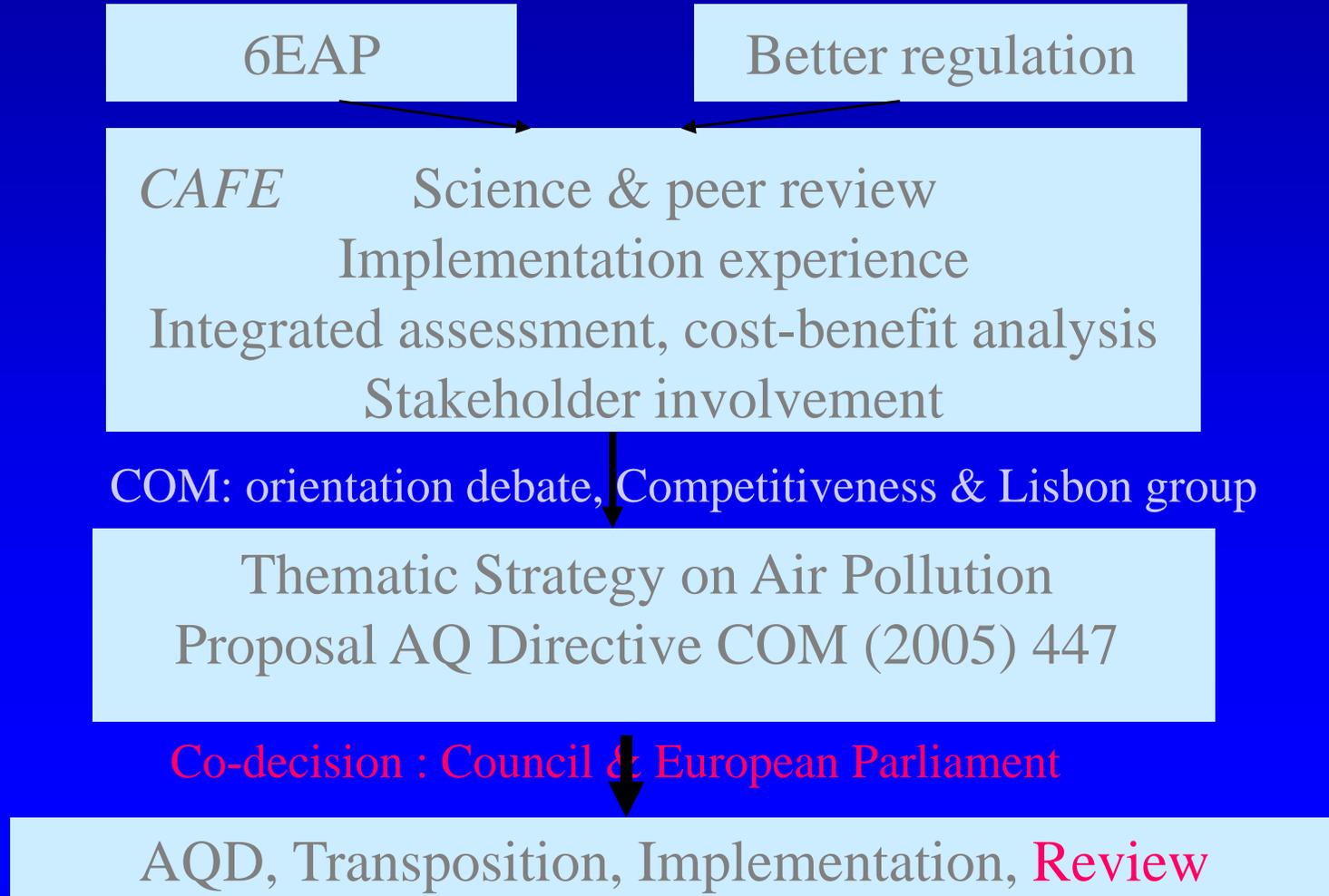
LDV

HDV

MC



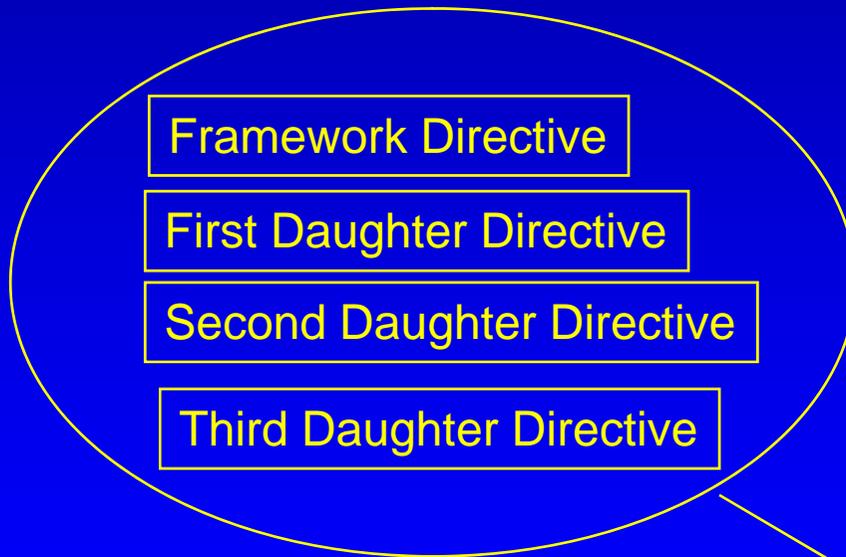
# The Process - CAFE





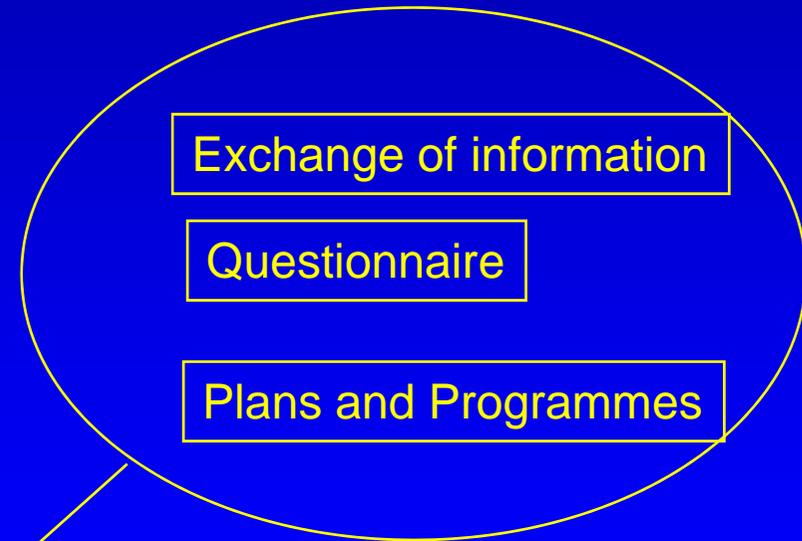
# 2008

## New Air Quality Directive:



Fourth Daughter Directive  
(recasting later)

## Implementing provisions:



Guidelines

Reporting obligations remain  
in force at least 2 years after  
adoption



## What's new (1)

### Twin environmental objectives for PM<sub>2,5</sub>

#### 1) Concentration cap (limit value)

**Concentration cap of 25µg/m<sup>3</sup> annual average to apply everywhere Robust monitoring of PM<sub>2,5</sub> concentrations**

#### 2) Exposure reduction target

**Target to reduce national average measured urban background concentration by 20% between 2010 and 2020 subject to later review where differentiated MS legal objectives to be proposed**

**Exposure reduction target should drive measures to deliver the objectives of the Thematic Strategy**



## What's new (2)

### Addressing compliance problems (Article 20)

- Attainment date not yet arrived (NO<sub>2</sub>)
- Attainment data already passed (PM<sub>10</sub>)
  - Only if rationale can be given
    - unfavourable climatic conditions, large trans-boundary contribution...
- **Time extension once, up to 5 years, subject to conditions**
- **Conditions** : amended plan which obligatory had to at least consider a list of measures (Annex to the Directive)
- Limit value still in force, but at Limit value + Margin of Tolerance level



## Co-decision : State of play

- Commission Proposal in September 2005
- European Parliament 1<sup>st</sup> reading September 2006
- Council political agreement October 2006
  - Common position 28 June 2007
  - Commission supports common position
- 2<sup>nd</sup> reading : NOW
  - EP Environment Committee vote on 9 October
  - Council: ongoing working party meetings
- EP Plenary: 12 December
  - If 2<sup>nd</sup> reading agreement is not reached, conciliation will be needed
- Entry into force if successful: 2008



# Review of the National Emissions Ceilings (NEC) Directive 2001/81/EC

- Will set emission ceilings by 2020
- 4 already regulated substances
  - most probably for the primary emissions of PM2.5
- Review to build upon
  - evaluation and review of National Prog's 2002 and 2006
  - the Clean Air for Europe (CAFE) Programme
  - the Thematic Strategy on Air Pollution
  - new scientific and technical work
- The revision also takes into account (proposed) Community legislation on specific sources
  - Euro 5/6
  - EURO VI
  - revision of the IPPC Directive
  - European Council GHG reduction target -20%
  - 20% by 2020 renewable energy target
- Proposal foreseen for spring 2008



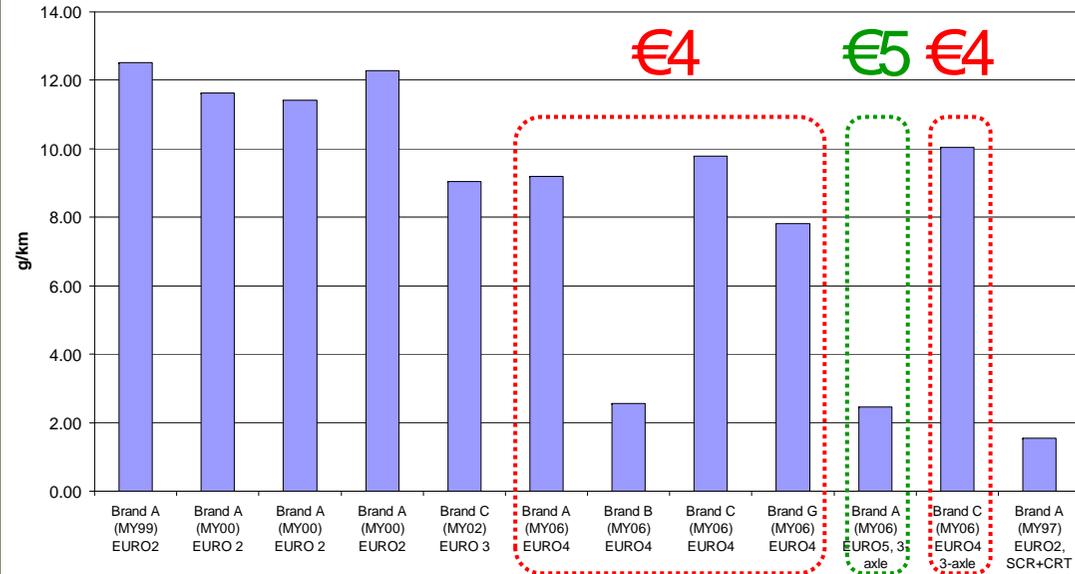
# Emissions in the real world

- Policy makers and the public are not aware of differences between certified and real emission values
- Exceedances of ambient NO<sub>2</sub> and PM concentrations expected in many zones
- Attention on real-world emissions is bound to rise

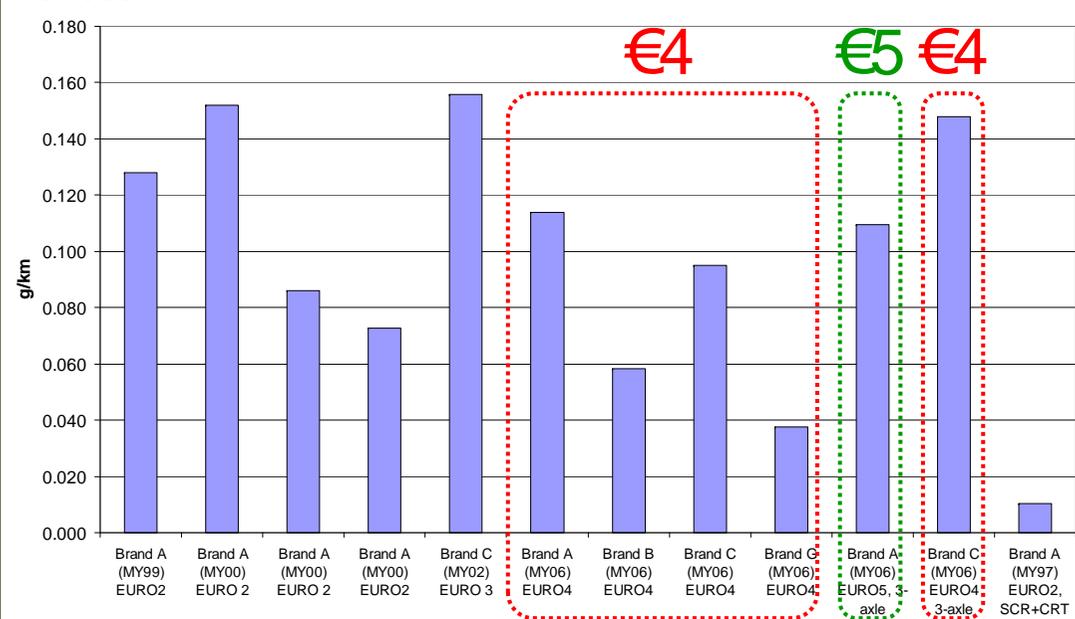


Urban bus duty cycle:  
 Euro 2/3 results as expected  
 Euro 4/5 results surprising

**NO<sub>x</sub>** NO<sub>x</sub> emissions of buses measured in 2006, Braunschweig city bus cycle



**PM** PM emissions of buses measured in 2006, Braunschweig city bus cycle





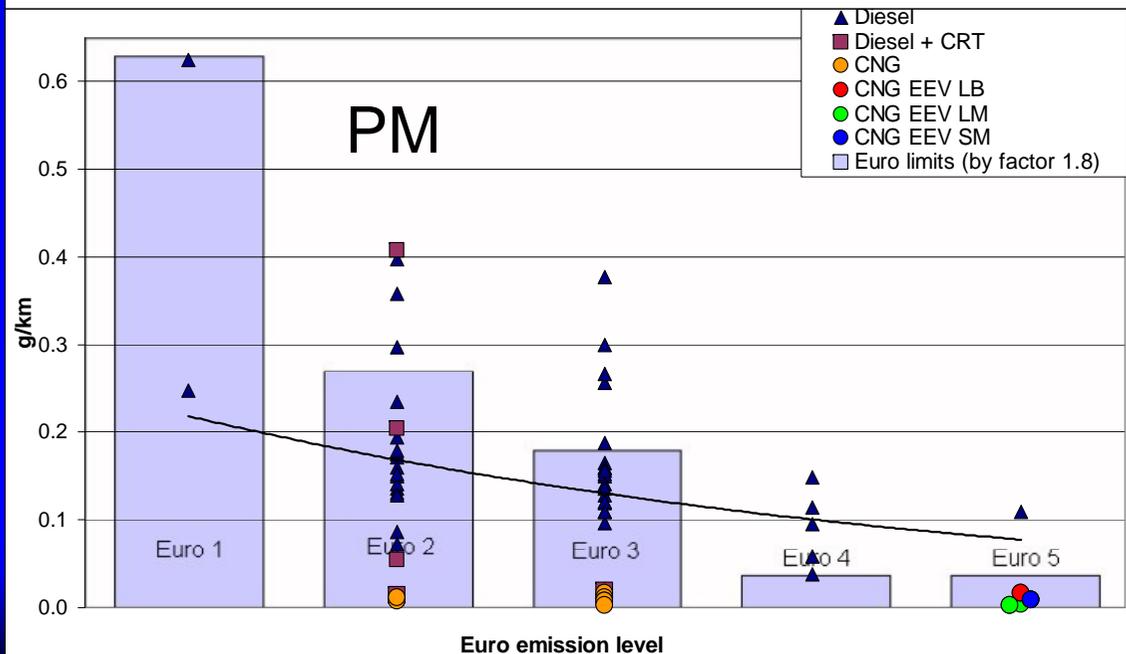
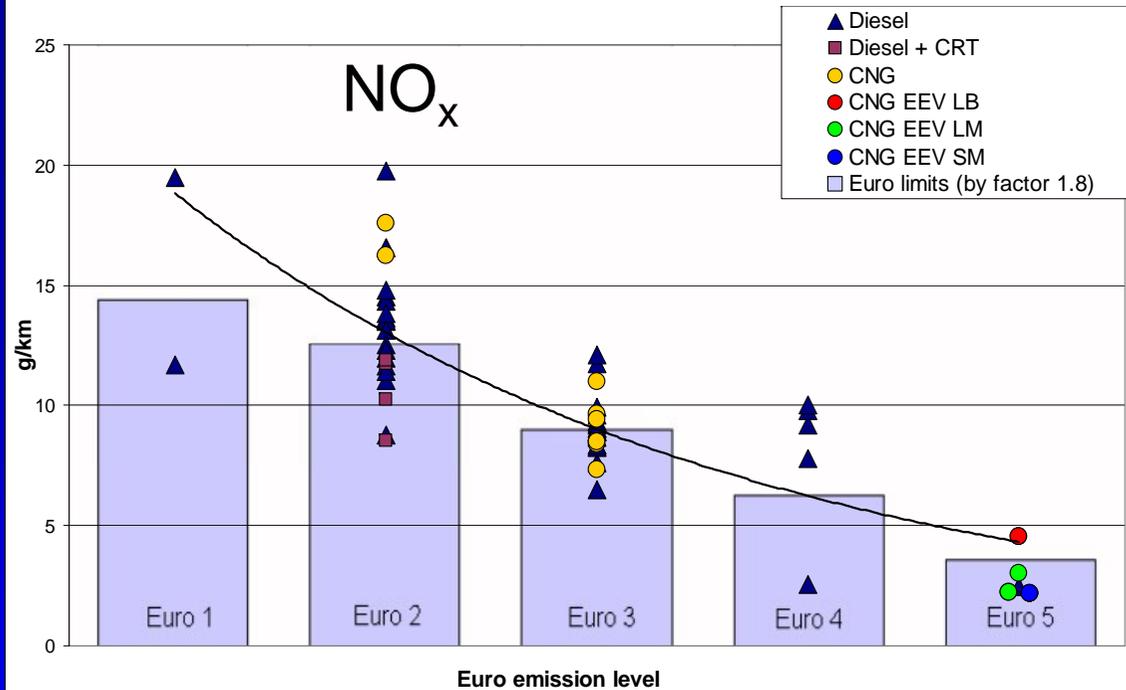
## Urban bus duty cycle (2):

Euro 4 NO<sub>x</sub> does not seem to be much better than Euro 3

Great scatter of PM

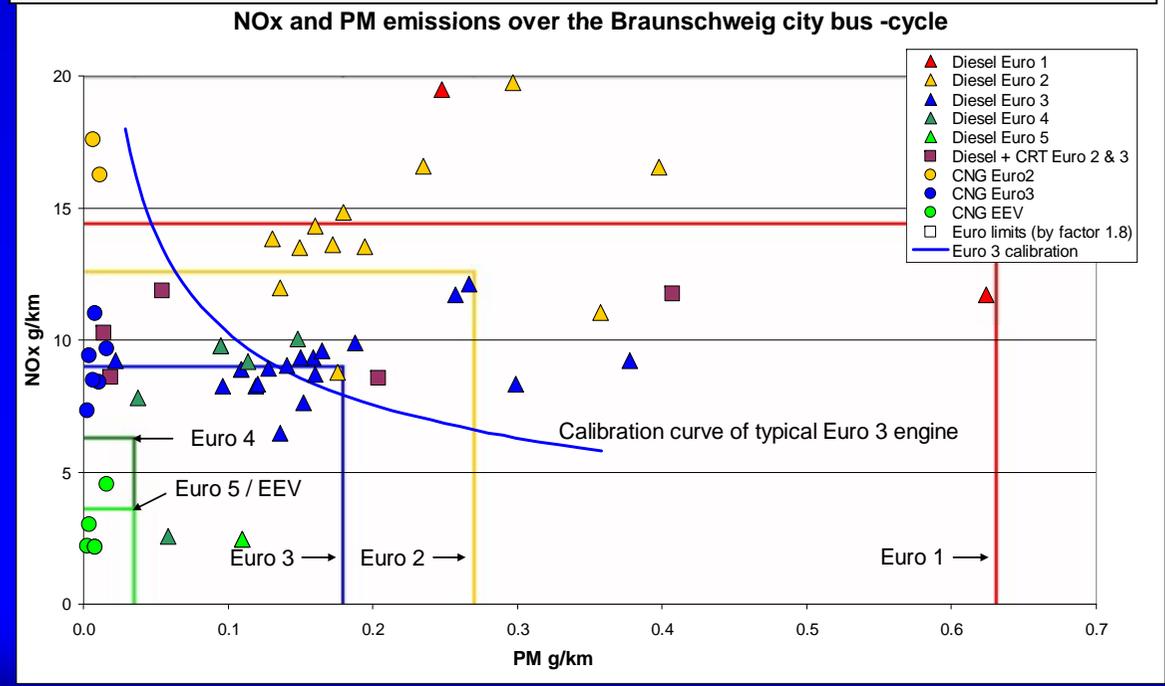
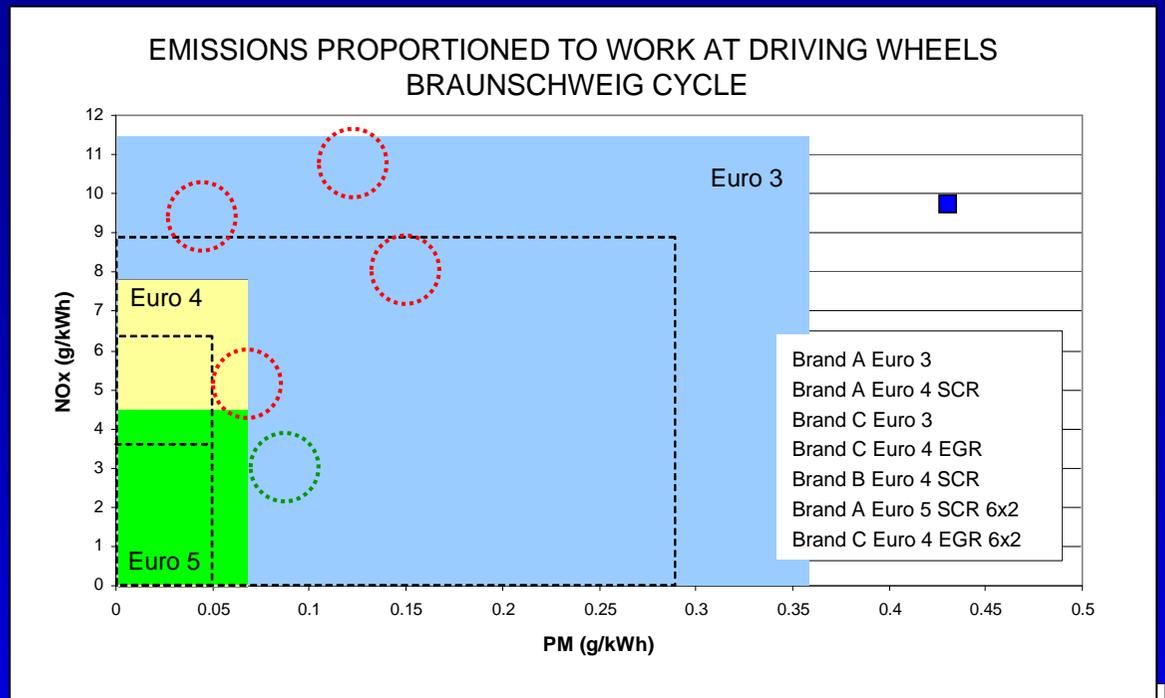
Two out of five DPFs were out of order

### NO<sub>x</sub> emissions vs. Euro-levels in Braunschweig city bus -cycle



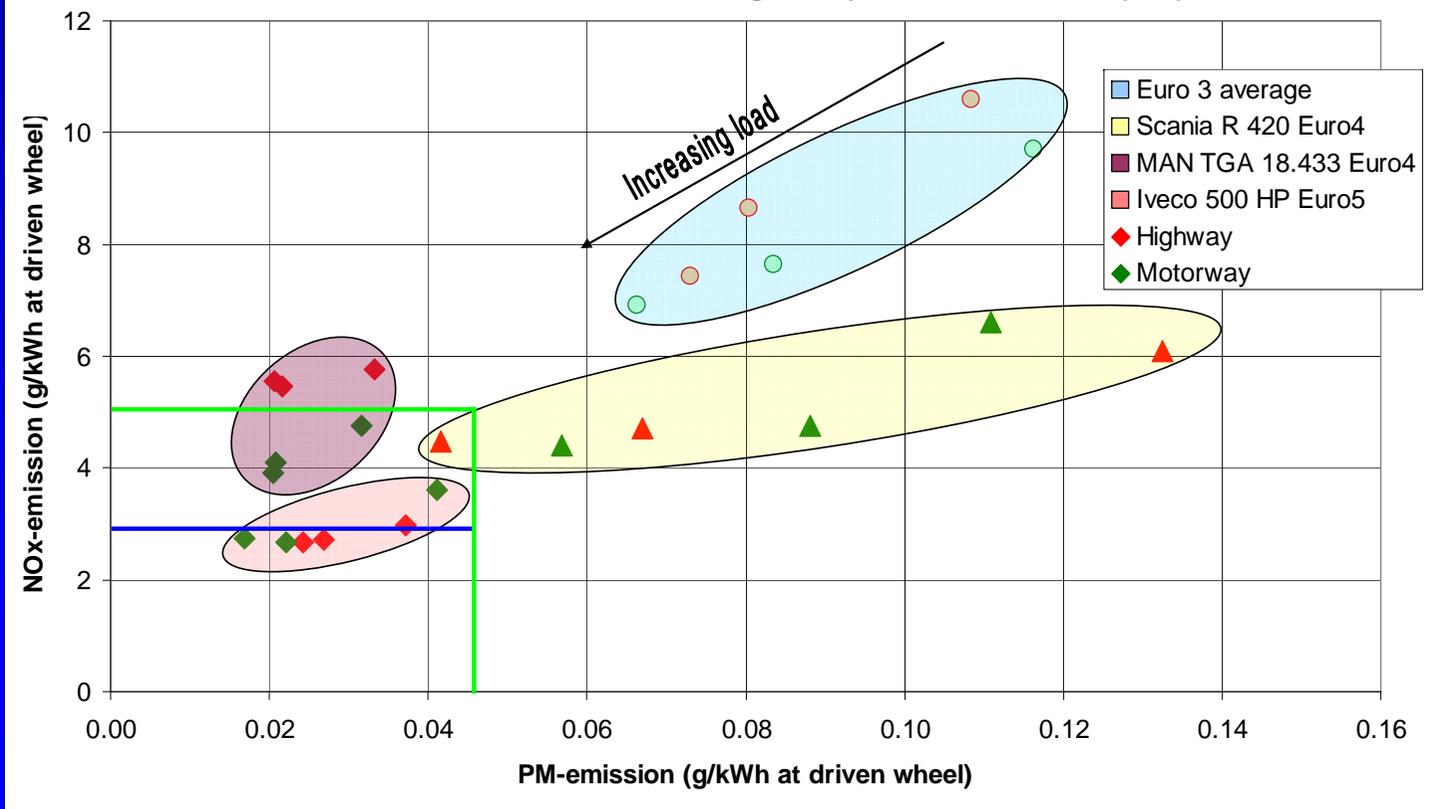


## Urban bus duty cycle (3):



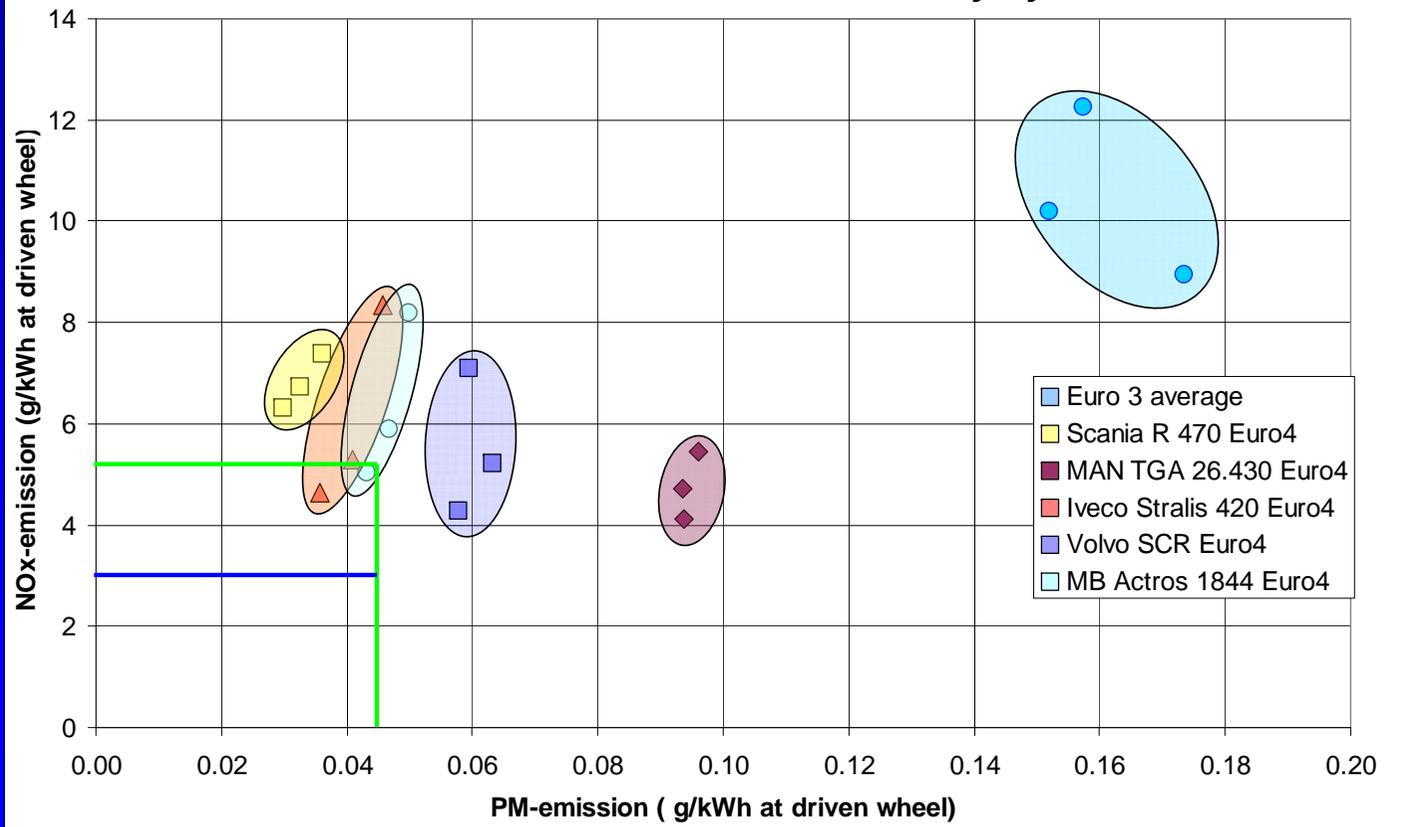


### Semi-trailers 42t PM- and NOx-emissions on highway and motorway cycles





### Trucks (max. 26t) PM- and NOx-emissions on delivery-cycle





## Conclusion

- AQ legislation being amended
- NEC legislation up for review
- Legislative action on sources
- Euro VI is part of the package foreseen in the Thematic Strategy
- Only one of several actions
- Emissions in real world driving conditions: awareness likely to rise