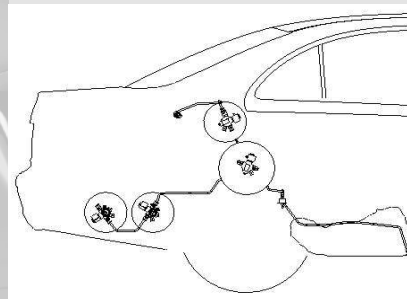# DaimlerChrysler Natural Gas Technology
An efficient way for CO2 reduction

Mercedes-Benz E 200 NGT

Jürgen Banken
Head of Project E 200 NGT

CNG is part of DaimlerChrysler's Fuels Roadmap

today   tomorrow

- Fuel Cell Technology
- Hybrid Vehicles
- **Alternative Fuels**
- Improvement of Conventional Fuels
- Optimization of Combustion Engines

Natural Gas Vehicles

Concept vehicle

- a vast variety of NGVs is available today

  - renown manufacturers
  - mature technology

Mercedes-Benz E-Class E 200 NGT

- 4 Cyl. Inline Engine (1.8l)

- Supercharged Power: 120 kW

- CO2 Emission: 168 g/ km in EDC (20% reduction to E200K)

- Bivalent Operation (Natural Gas and Gasoline)

- Range (Natural Gas): 300 km

- Range (Gasoline): 700 km

J.Banken

Mercedes-Benz E-Class with Natural Gas Technology

- most powerful passenger car with natural gas drive
- no difference in driving between petrol and natural gas
- world premiere E 200 NGT: Sep. 2003
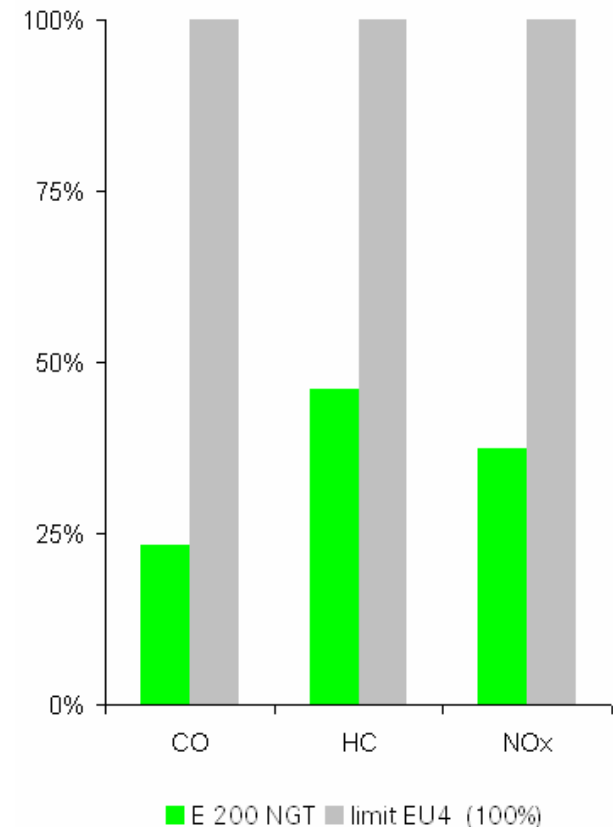- sales exceed expectations by fare

-

- acknowledged design
- the E-Class ist the safest vehicle in its segment
- New Generation E-Class: available from June 10th 2006 (Europe)

environmental advantages of Natural Gas Vehicles

- Vehicles running on CNG are known for their overall contribution to cleaner air.

- Natural gas has low carbon monoxide (CO) emissions, emits no particulate matter and has reduced volatile organic compounds (VOC).

- Per unit of energy, natural gas contains less carbon than any other fossil fuel, leading to lower carbon dioxide (CO2) emissions.

- In addition no evaporative and refueling emissions occur due to the closed, pressurized system.

Chart legend: ■ E 200 NGT ■ limit EU4 (100%)
Axis: CO, HC, NOx — 0% to 100%

reasons to buy an NGV

- environmentally friendly

- reduced running costs
  e.g. distance covered with 10 EUR:
    -   90 km with Petrol (E 200 Kompressor)
    - 140 km with Diesel (E 200 CDI)
    - 210 km with CNG (E 200 NGT),

- reduced vehicle taxes and
  other benefits
    - e.g. in cities with high pollution
    - e.g. in countries with Natural Gas resources

- companies related to Natural Gas
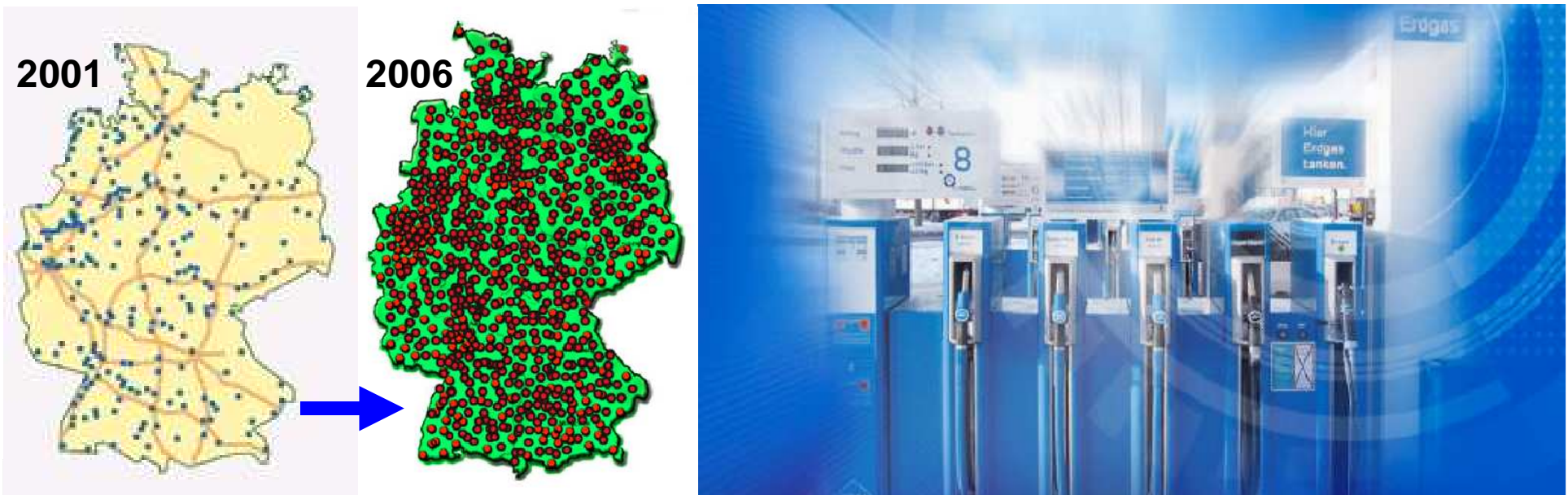 exploration, distribution or sales

J.Banken

filling stations

- The lack of filling stations is one of the crucial points for the wider market implementation of natural gas vehicles. However, during the last years the number of filling stations has grown in all European countries.

- e.g. in Germany the number of CNG filling stations has increased drastically in the in the last years. (2002: 220, 2004: 500, today 650)

2001

2006

Natural Gas Vehicles: The Road Ahead !

- environmentally friendly
- politically wanted
- reasonable

thank you