

**Fifth Annual Climate Change Solutions Conference**  
**25 May 2005**

# **Gaseous and other fuel solutions**

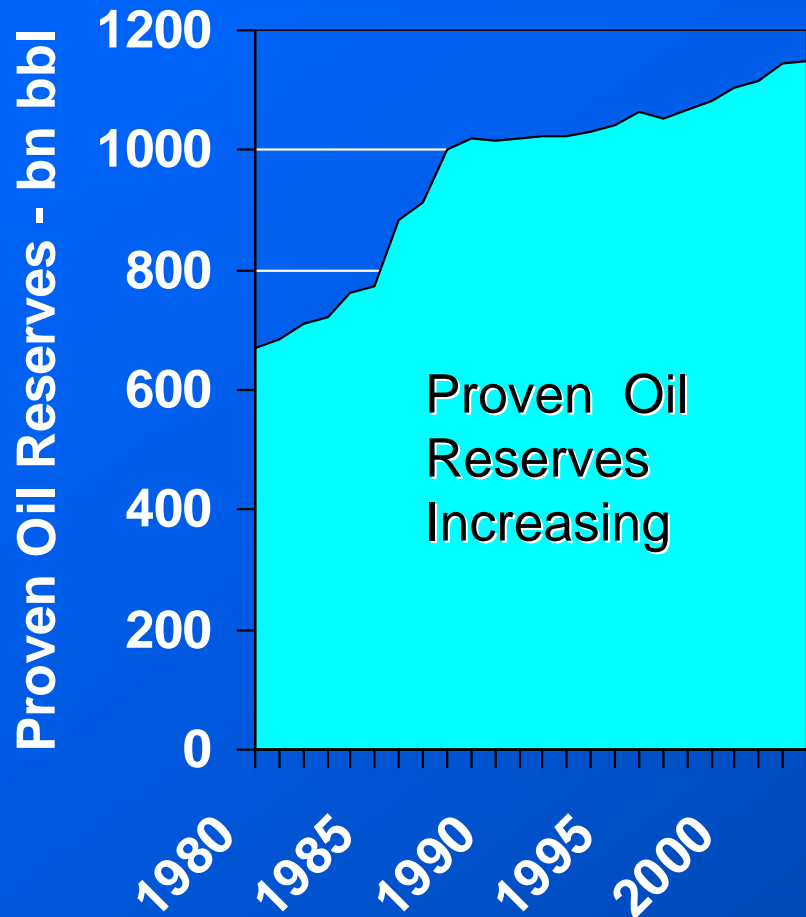
**Transport Fuels – Now and in the Future**

**Nick Vandervell**  
**Communications Director**  
**UK Petroleum Industry Association**

# UK Petroleum Industry Association

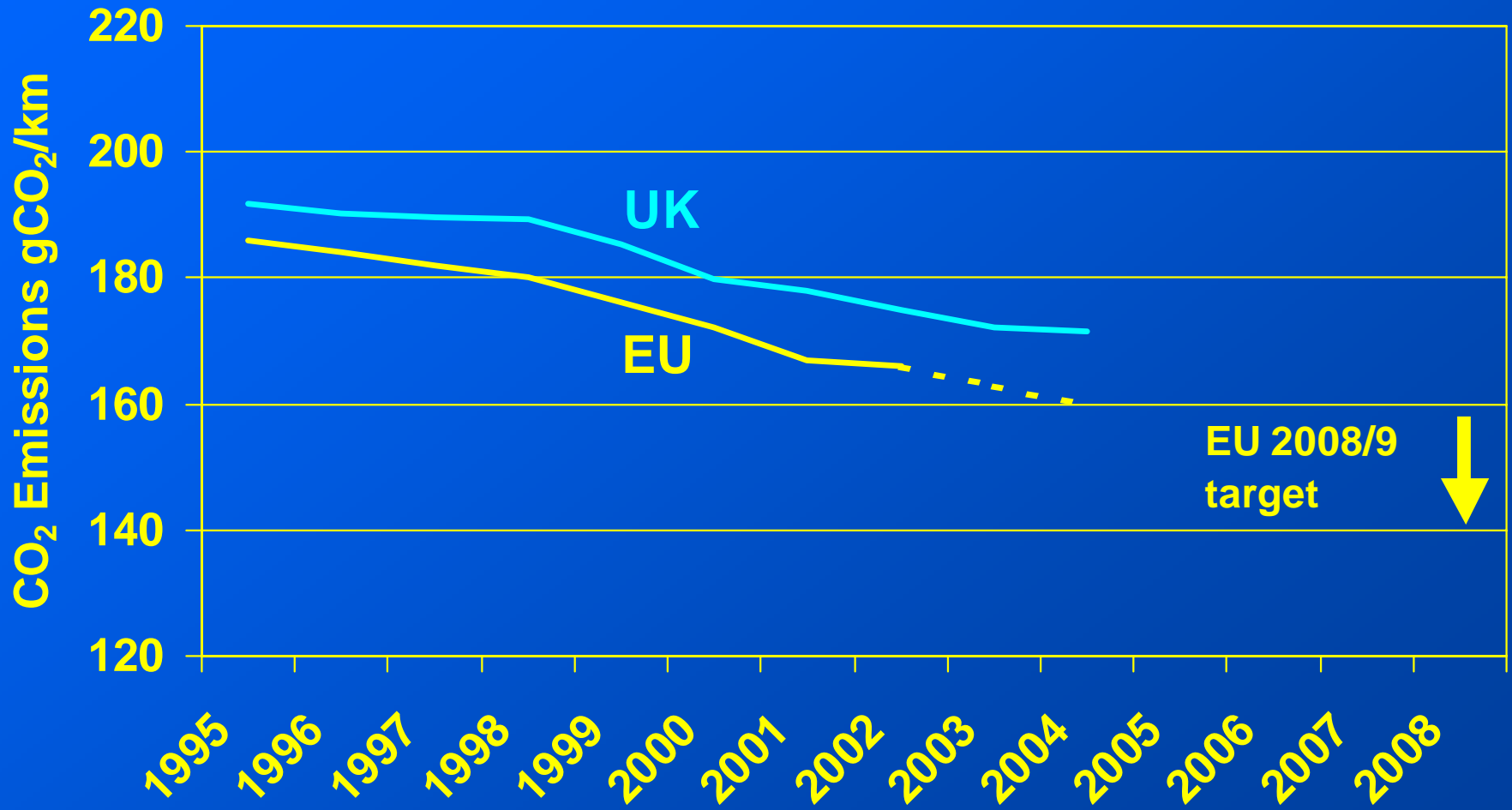
- **UKPIA is the trade association representing the UK Refining and Marketing interests of BP, ChevronTexaco, ConocoPhillips, ExxonMobil, Murco, Petroplus, Shell, Total**
- **Our member companies:-**
  - Operate the 9 major crude oil refineries in the UK
  - Supply 30% of the UK's energy needs
  - Serve around 4 million customers a day
  - Employ 100,000+ people in the UK
  - Supply around 120 million litres of petrol and diesel a day

# Oil is not running out (yet)



- Oil used ~1 trillion barrels
- Proven reserves 1.15 trillion barrels (41 years)
- Unproven reserves / yet to find
  - + unconventional oil
  - + gas to liquids process
  - + effect of price

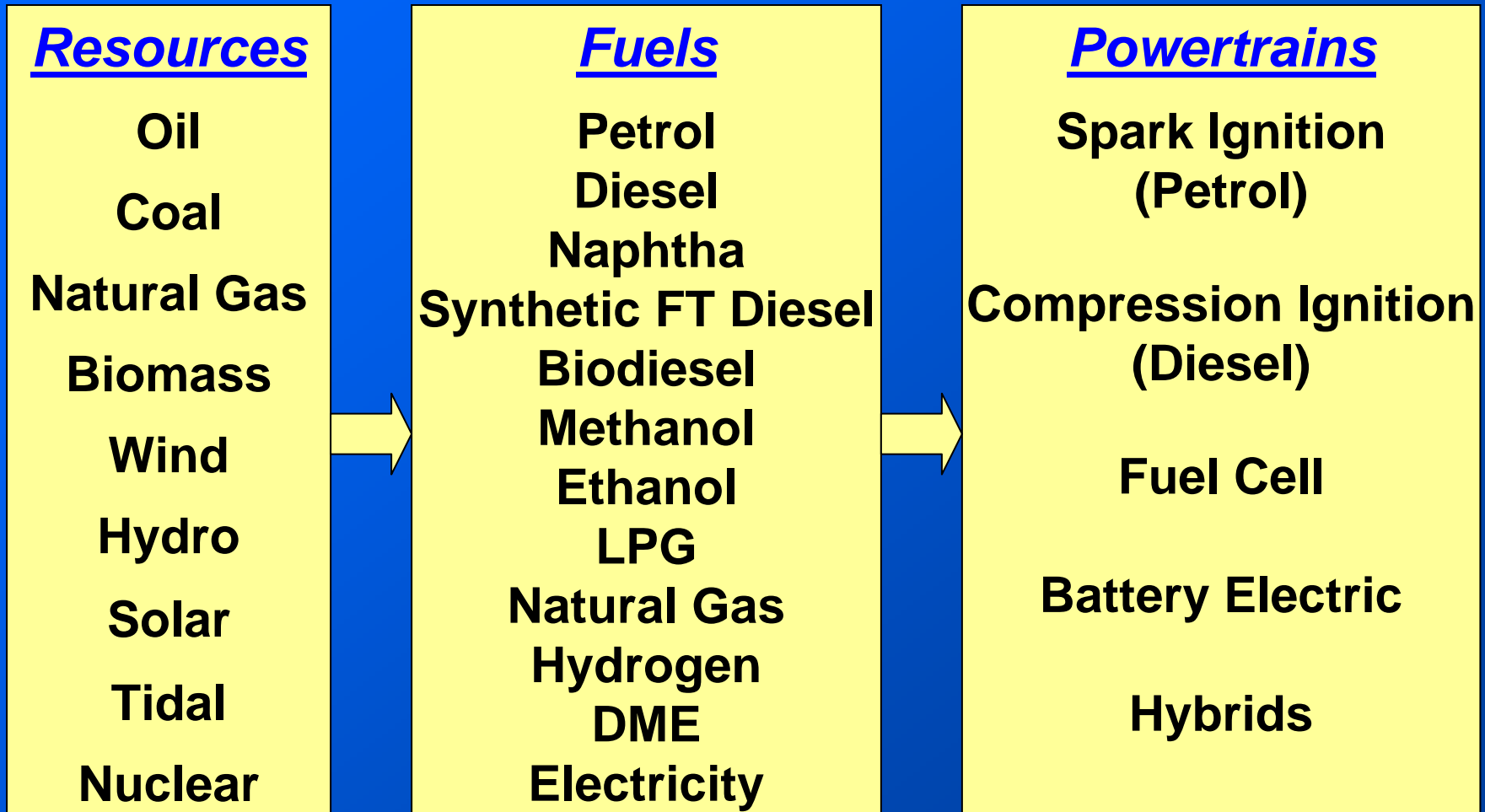
# Efficiency of new cars is improving



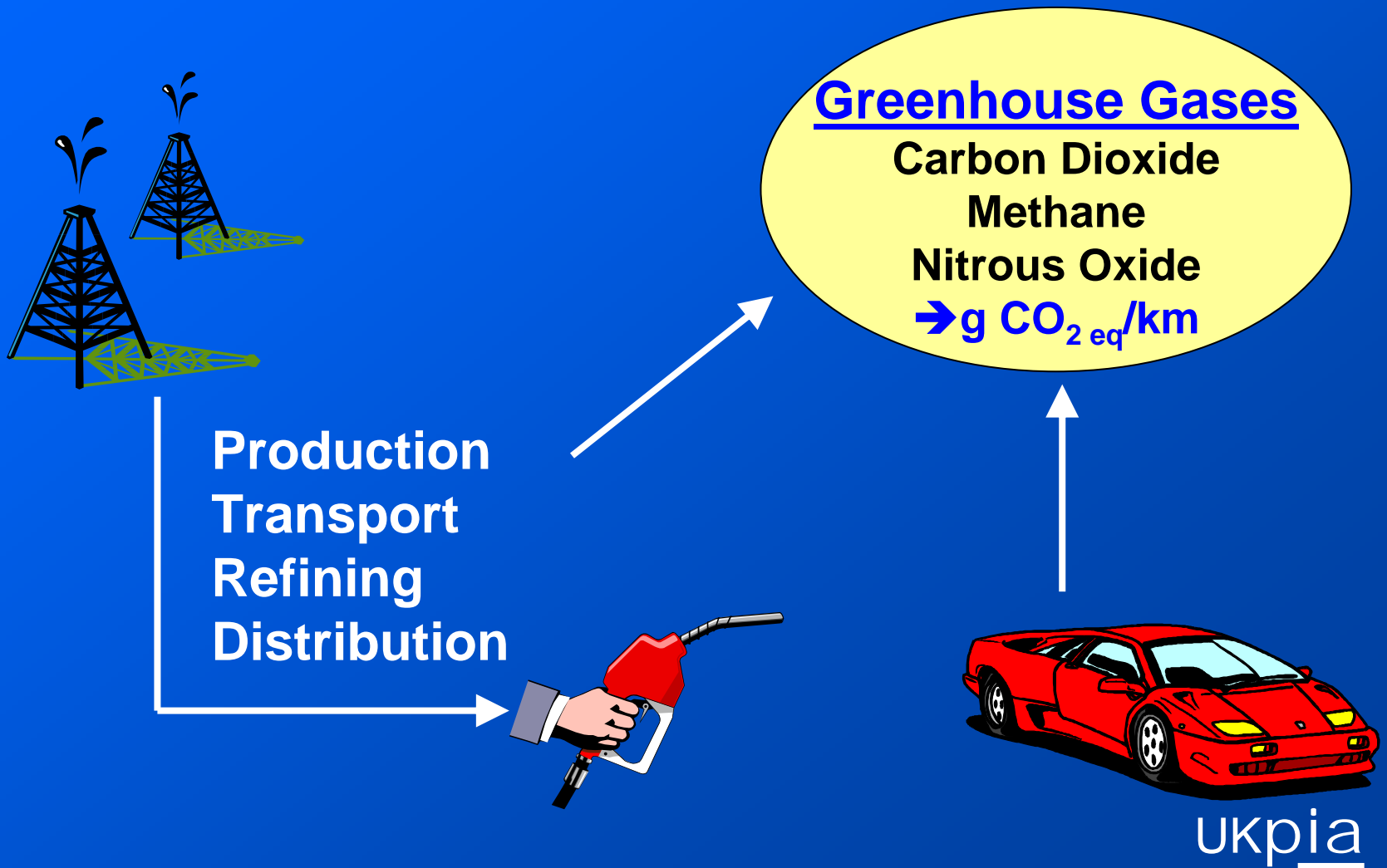
# Petrol/diesel will dominate for decades

- **As they have unique advantages:**
  - Easy to handle liquids with low vapour pressure
  - High energy density, relatively low cost and very wide availability makes them particularly fit for purpose
  - Production / distribution infrastructure are there, fully mature.
  - Customers are familiar with them
  - Historically cheaper than the alternatives
- **Large potential economy gains expected from range of vehicle technologies, enabled by sulphur free fuels**
- **Hydrogen / advanced biofuels under development**

# Numerous Future Options

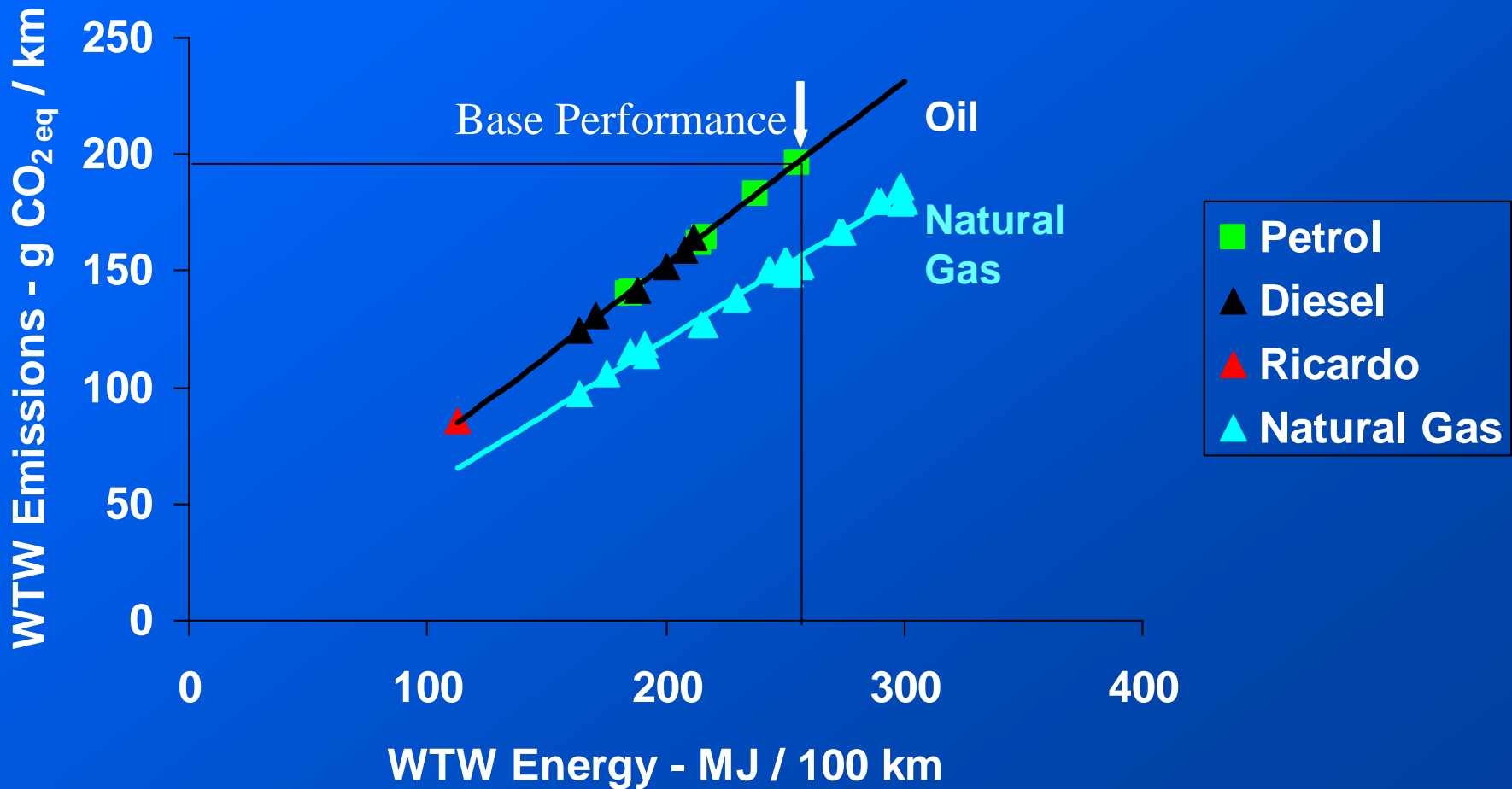


# Well to Wheels Analysis



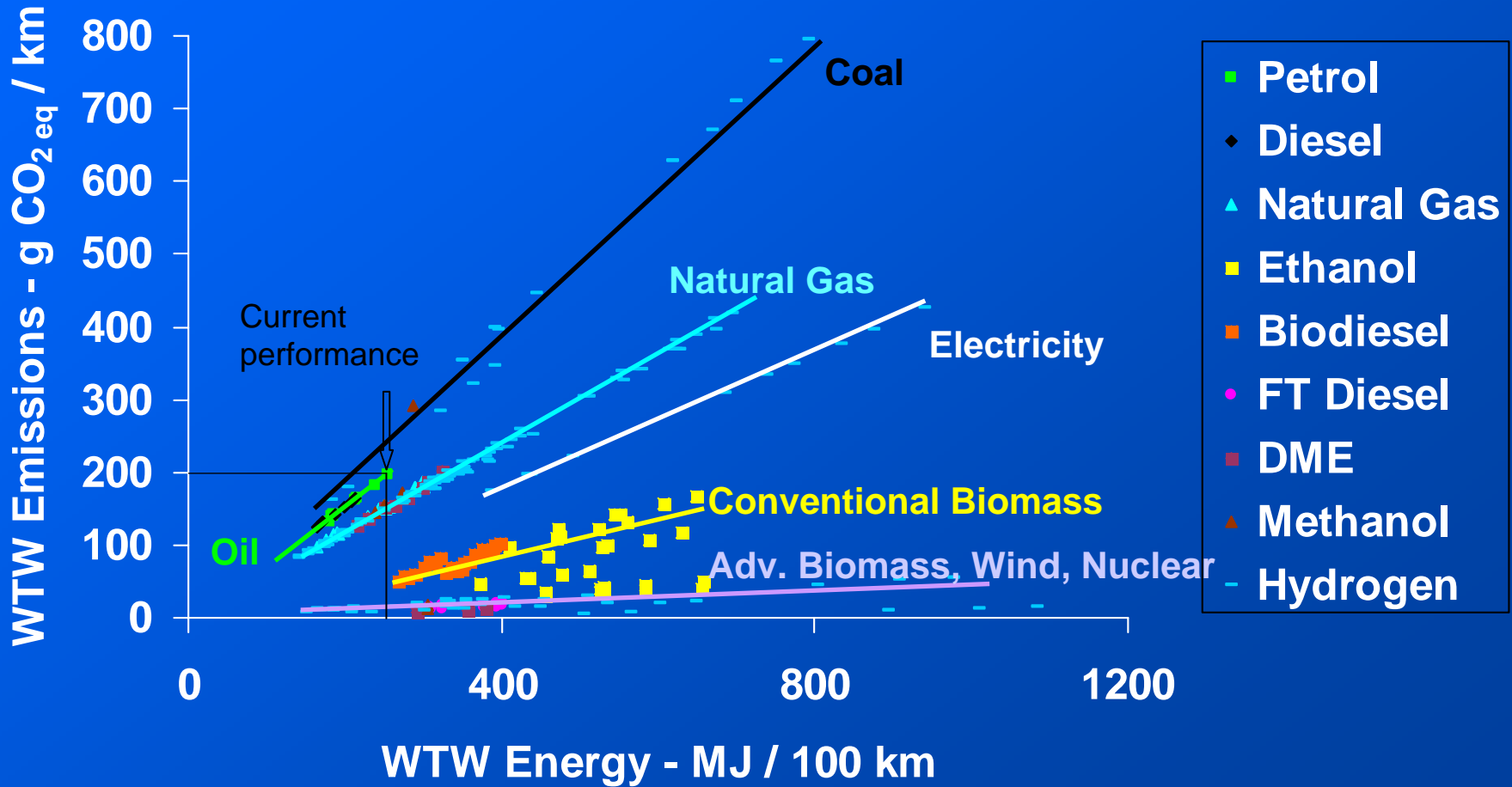
# Wells to Wheels Study

Euro Compact car with 5 seats eg VW Golf

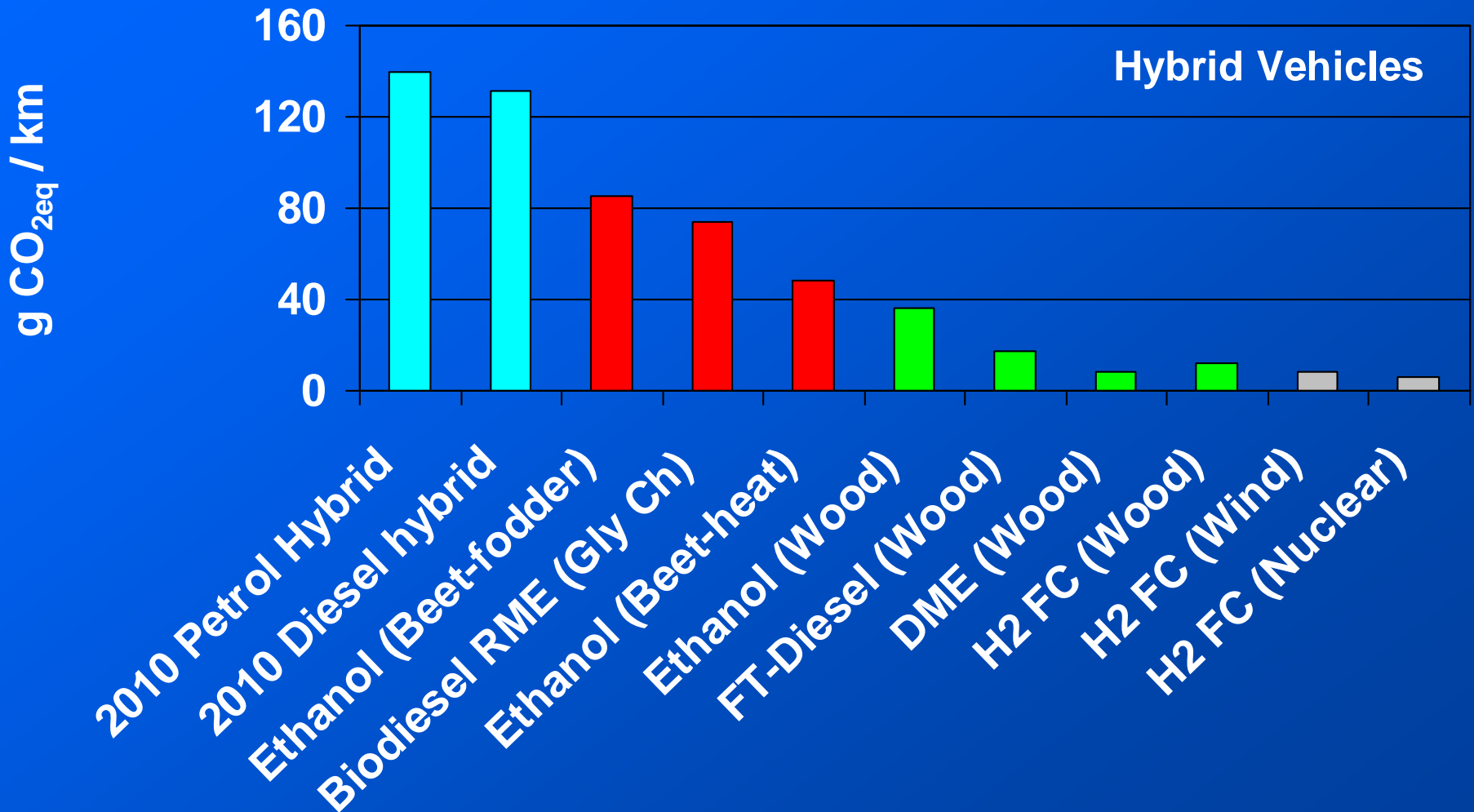




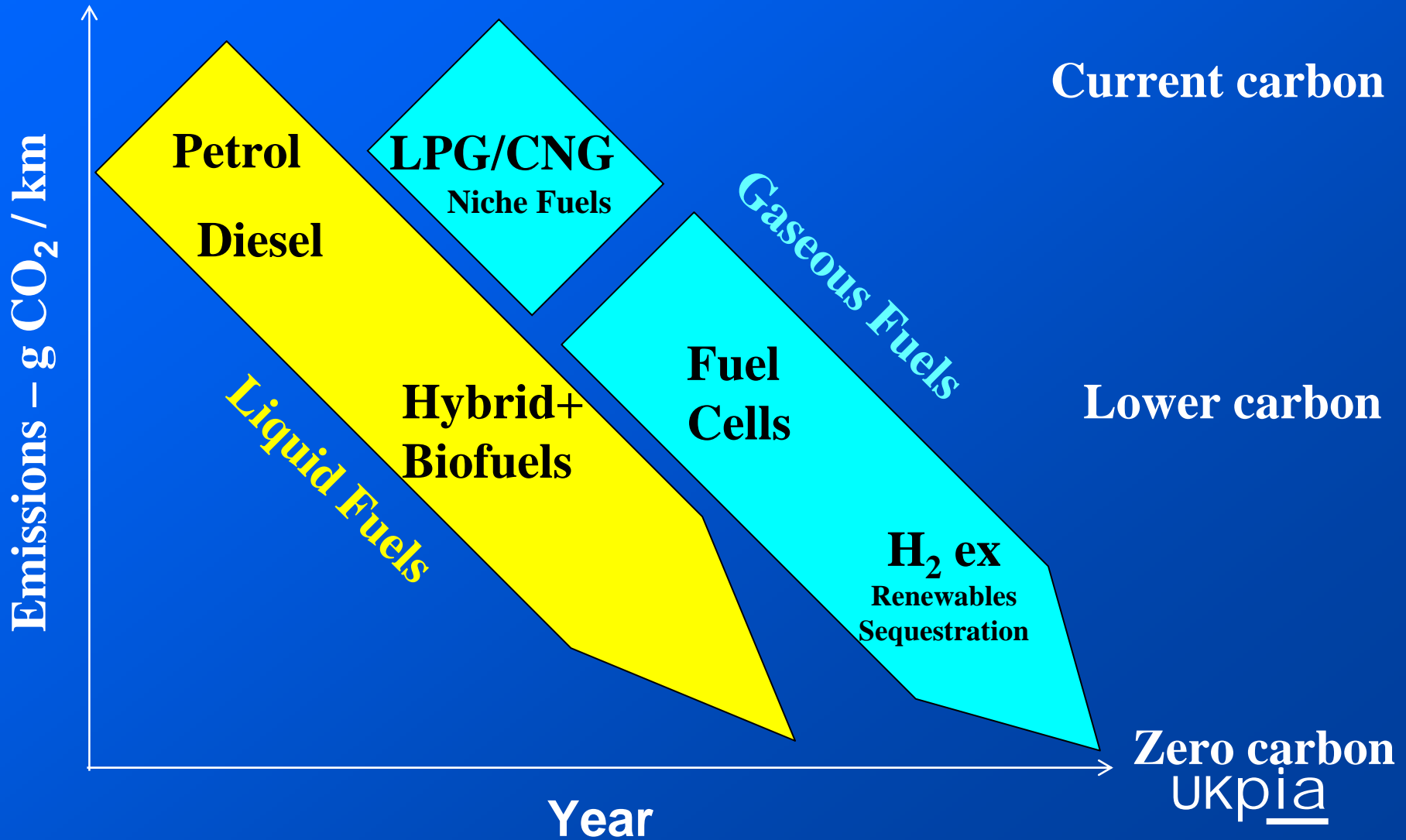
# Concawe/Eucar/JRC Well to Wheels Study



# Some Future Options



# Possible Future Vision



# Summary

- Demand for mobility will grow
- Technical measures can reduce emissions of greenhouse gases for a number of decades
- Influencing consumer behaviour can help
- Eventually need lower carbon fuels
  - Hydrogen from renewables, nuclear or natural gas/coal with sequestration but many technical hurdles to overcome
  - Biomass derived fuels promising but need large area of land
  - Alternatives will have to maintain security of supply
- Oil industry and others actively developing options