

The importance of low carbon cars

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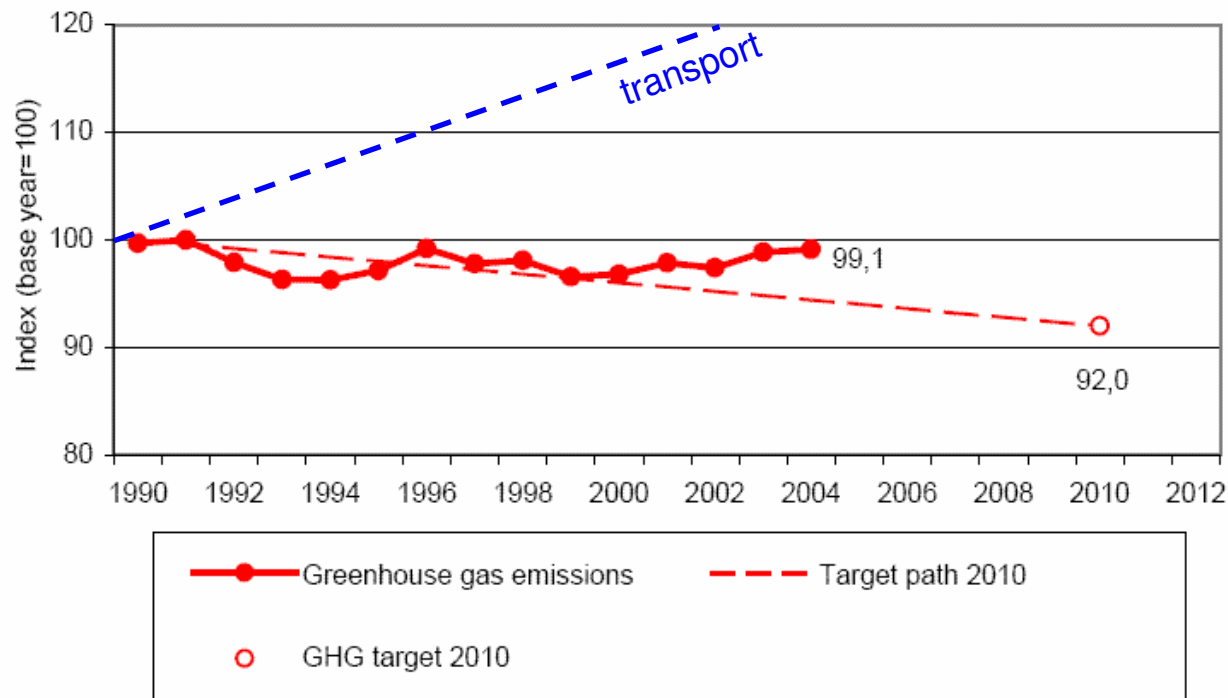
Dutch Ministry of Environment





Transport CO₂ emissions increase

Total greenhouse gas emissions





Total CO₂ emissions have to decrease

- temperature rise < 2 degrees

- Global: -50% in 2100 (c.t. 1990)

- Western Europe: -80% in 2100

- Western Europe: -40 to -60% in 2030

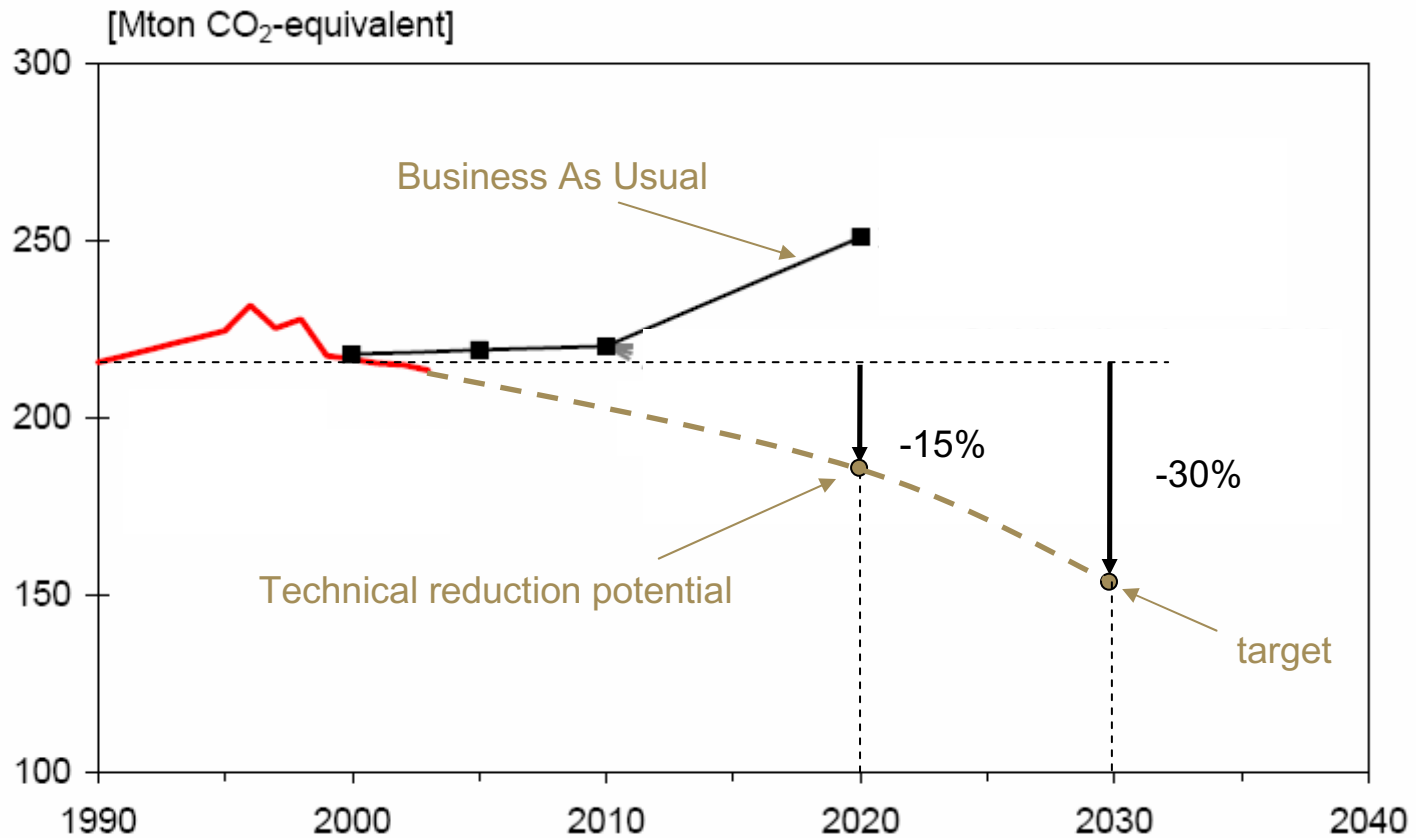
- Netherlands: -40 to -60% in 2030 (c.t. 1990)

30% in the Netherlands

the rest outside via JI or CDM



To meet -30% in 2030, we need all measures available

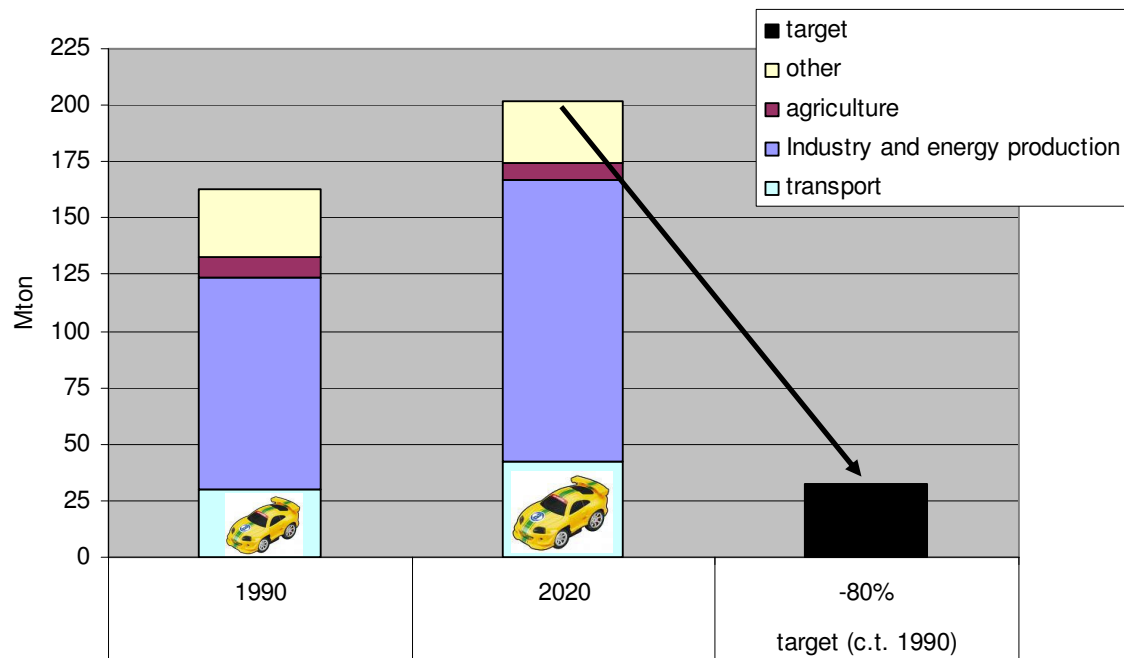


We need transport CO₂ levels well below the 1990-level



To meet -80%, we need low carbon transport

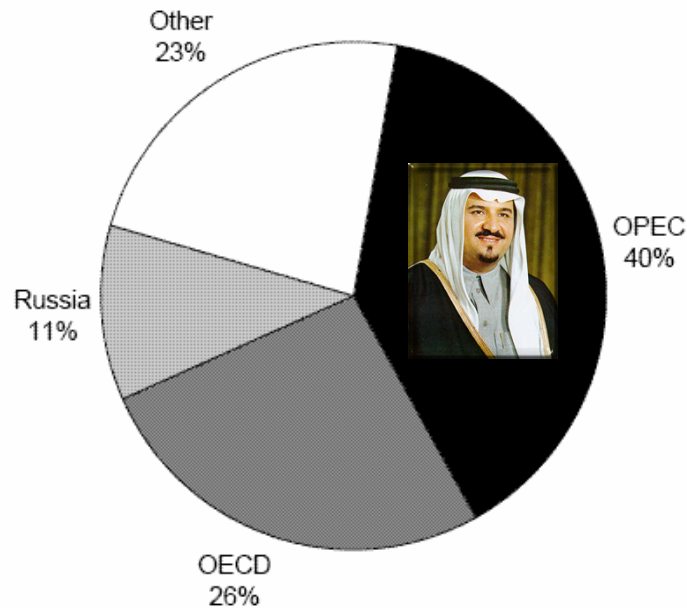
CO2 emissions in 2020 and long term CO2 target



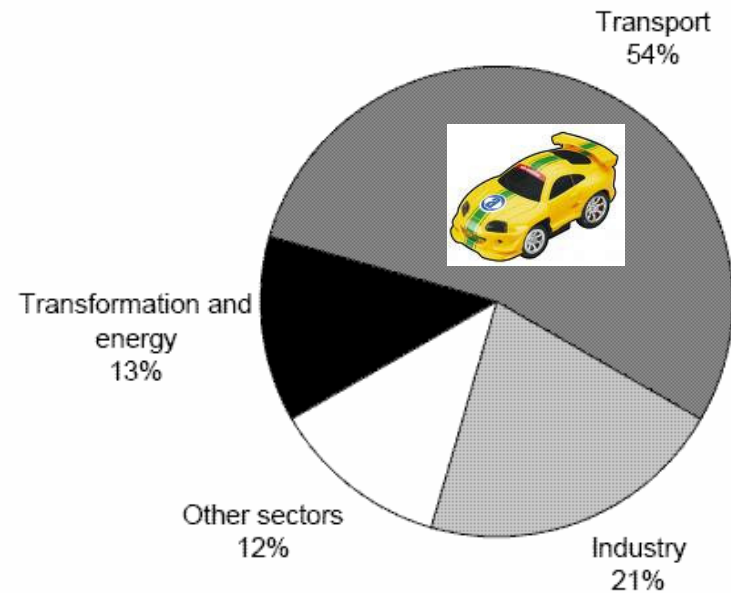


EU becomes extremely dependent on foreign oil

World oil production



World oil consumption



- 2030: 90% of EU oil consumption will be import
- Transport's share in oil consumption is increasing



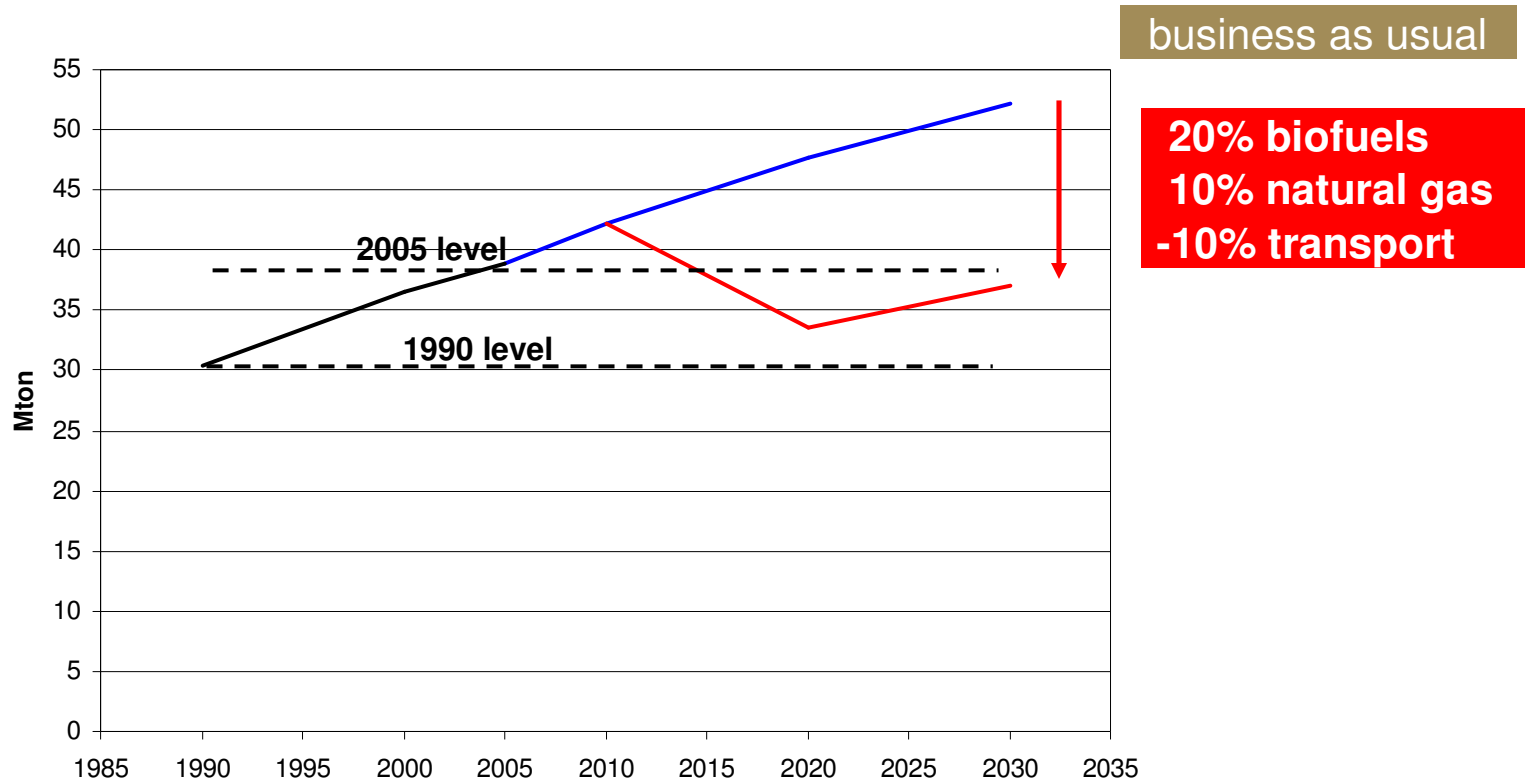
Conclusion 1

We need low carbon transport

Do we need fuel-efficient cars?

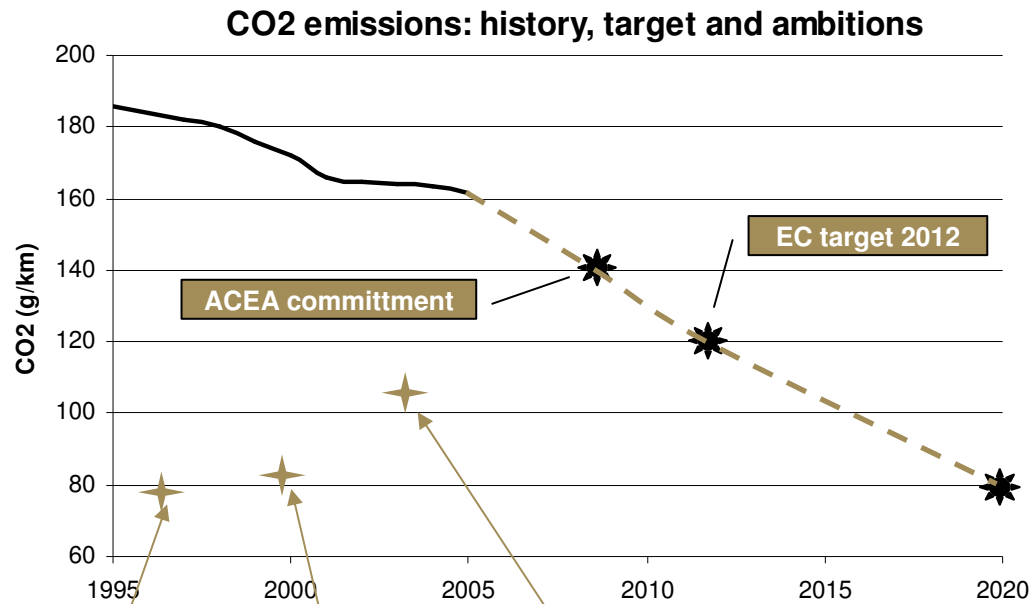


Without fuel-efficient cars: CO₂ levels not below 1990-level





Fuel efficient cars



For comparison:



Twingo Smile
78 g/km



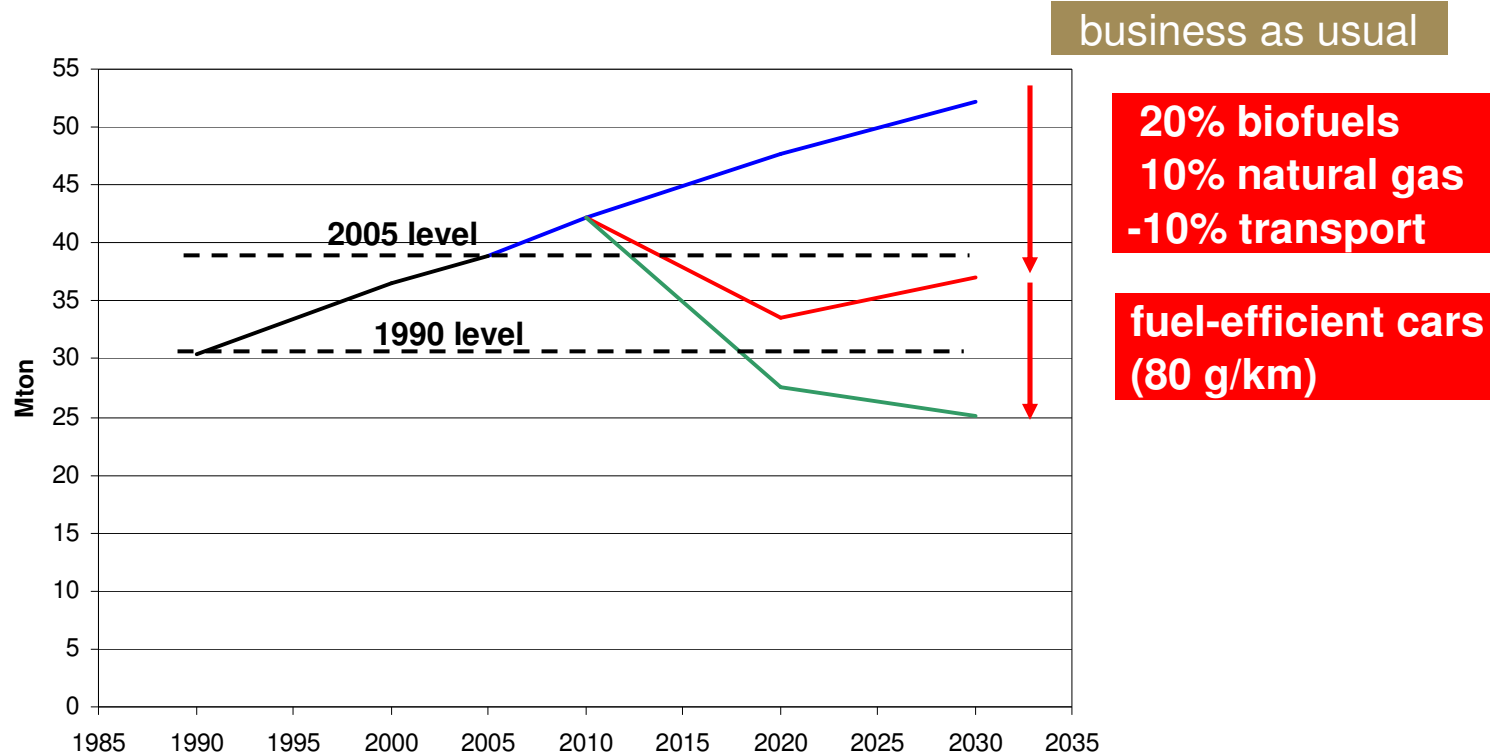
VW Lupo 3L
81 g/km



Toyota Prius II
104 g/km



Only with fuel-efficient cars: CO₂ levels well below 1990-level





Conclusion 2

We need fuel-efficient cars

What is the best policy?





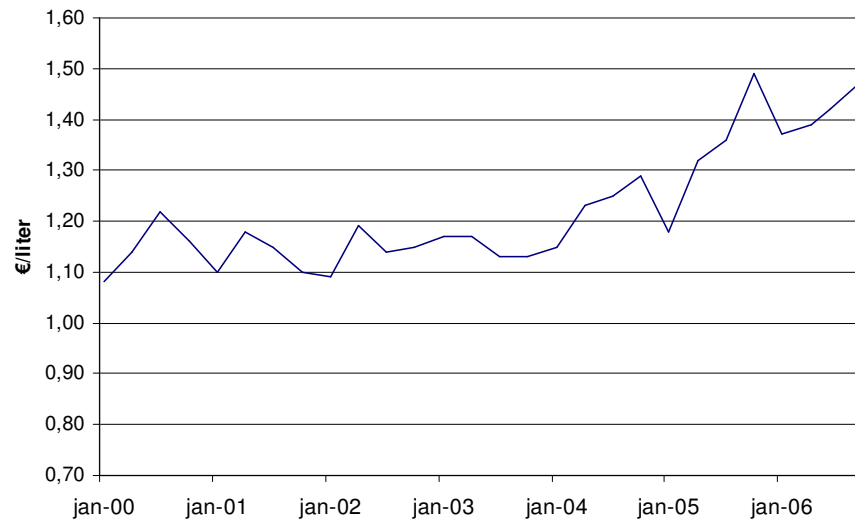
What is the best policy?

- CO₂ emission trading = cost effective CO₂ abatement
- **BUT:**
 - minimal CO₂ reduction for passenger cars:
 - consumers hold on to **mobility and car preferences**
 - consumers won't pay for fuel efficient cars

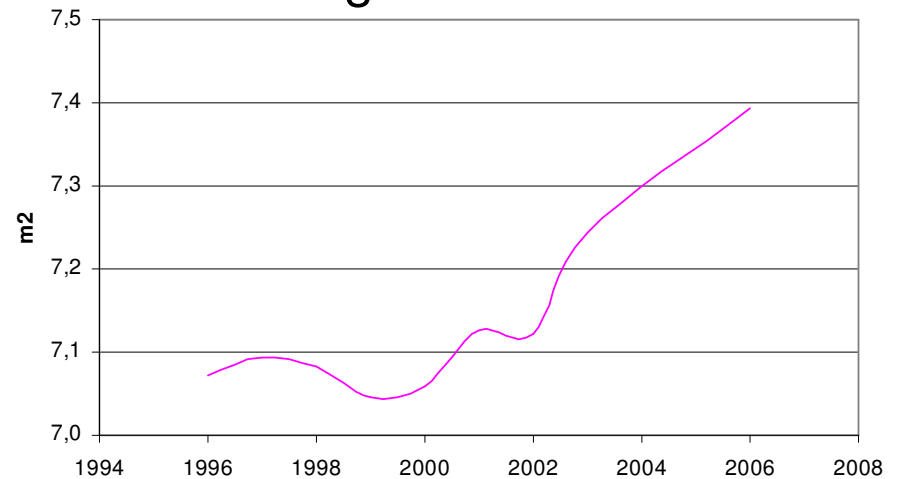




Consumers hold on to their car preferences



Average size new cars

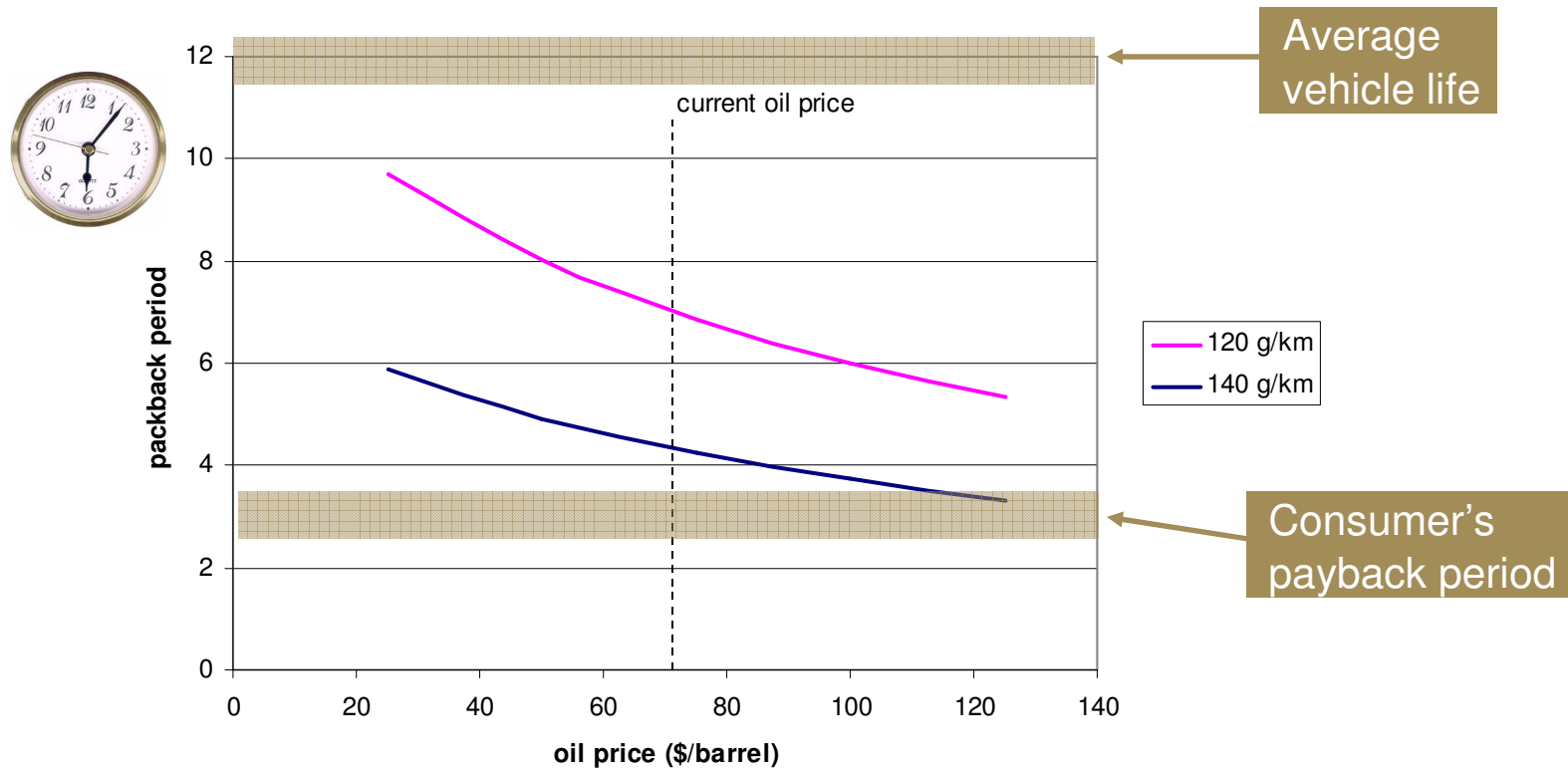


Fuel price



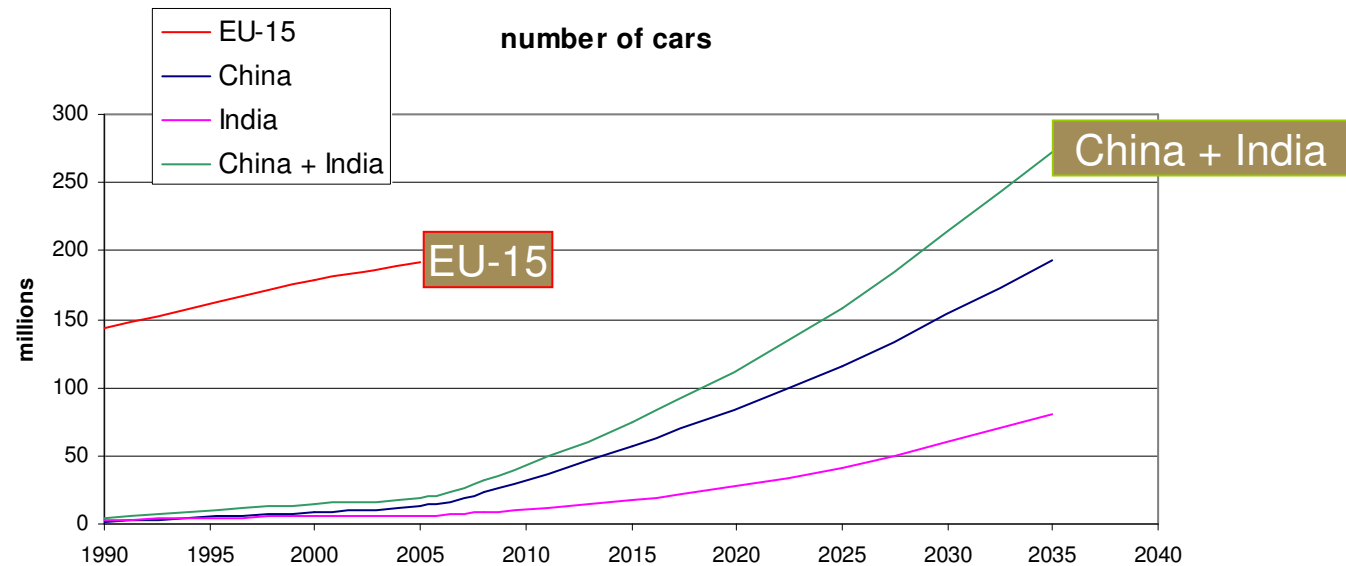
Consumers are not willing to pay for fuel efficiency technology

Payback period of low carbon cars compared to average 2002 car





Car ownership China and India is increasing



- To prevent a strong increase in car CO₂ emissions, Europe should:
 - Decrease CO₂ emissions from new cars in the EU
 - Export fuel efficient technology to developing countries



Conclusion 3

We need policies to force

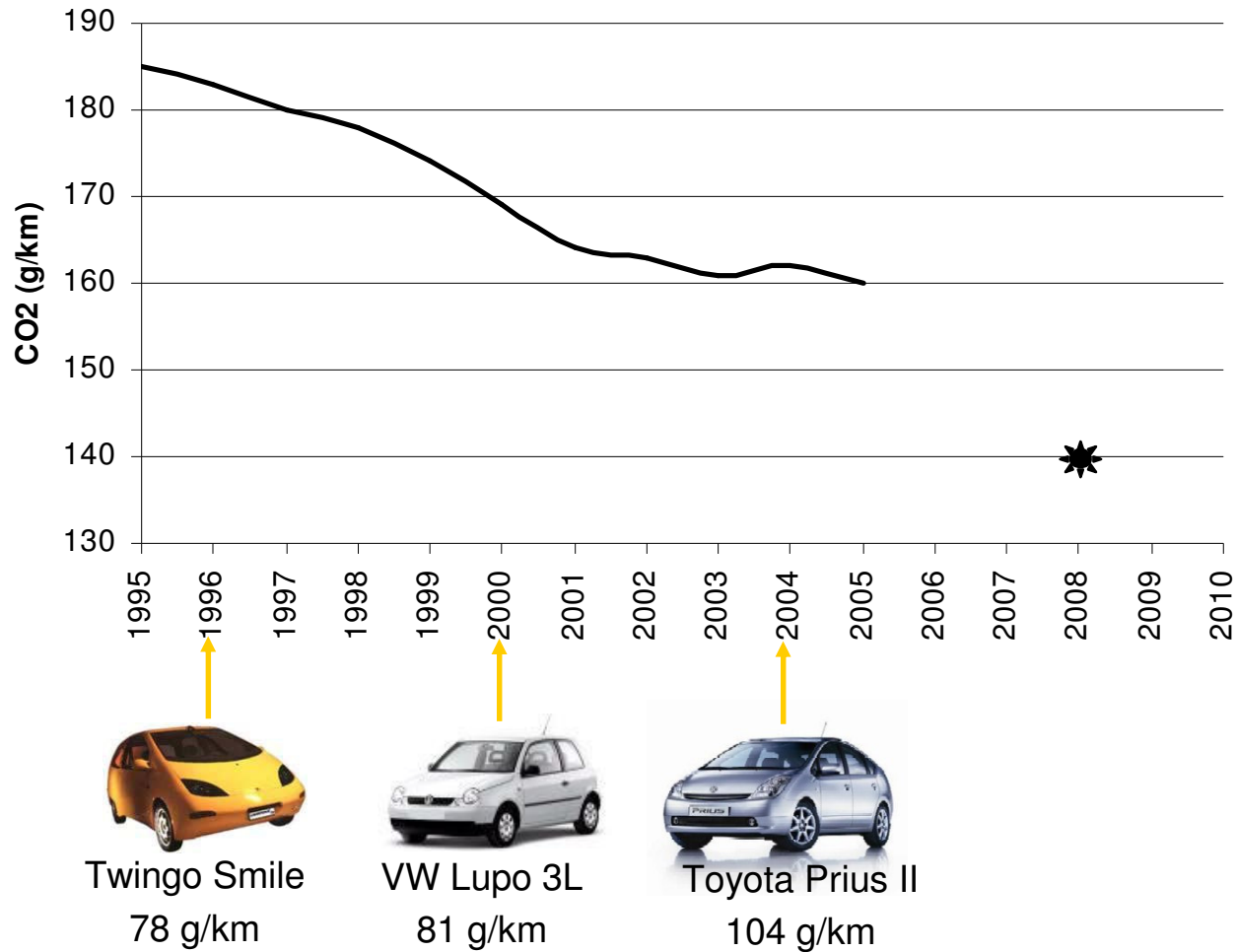
- **manufacturers to produce fuel-efficient cars**
- and**
- **consumers to buy fuel-efficient cars**

Should we continue with voluntary agreements?





Progress voluntary agreement (ACEA)





Voluntary agreements

- Why do these voluntary agreements fail?
 - there is no penalty for not meeting the targets
 - there is no financial incentive for manufacturers to produce fuel- efficient cars
 - the financial incentive for consumers to buy fuel- efficient cars is too small



Conclusion 4

We need CO₂ standards for new cars

**Standards with closed trading among car manufacturers limits costs and economic impact
(“baseline and credit”)**



Conclusions

1. **We need low carbon transport**
 - meet the national CO₂ targets
 - diminish the oil dependency





Conclusions

1. We need low carbon transport
2. **We need fuel-efficient cars**
 - transport CO₂ emissions below the 1990 level
 - emerging countries need fuel-efficient cars





Conclusions

1. We need low carbon transport
2. We need fuel-efficient cars
3. **We need to force manufacturers to produce and consumers to buy fuel-efficient cars**
 - pricing policies like CO₂ emission trading won't lead to production and sales of low carbon cars



Conclusions

1. We need low carbon transport
2. We need fuel-efficient cars
3. We need to force manufacturers to produce and consumers to buy fuel-efficient cars
4. **We need CO₂ emission standards with closed trading between manufacturers**
 - voluntary agreements are not satisfactory
 - trading delivers financial incentives for both manufacturers and consumers to shift to fuel-efficient cars