

# Reducing CO2 emissions from cars

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# T&E membership

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49 Members – 21 Countries



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[www.transportenvironment.org](http://www.transportenvironment.org)

# Four critical issues

1. The basis - improving the impact assessment
2. Targets and timetables
3. Compliance mechanism
4. Class parameter

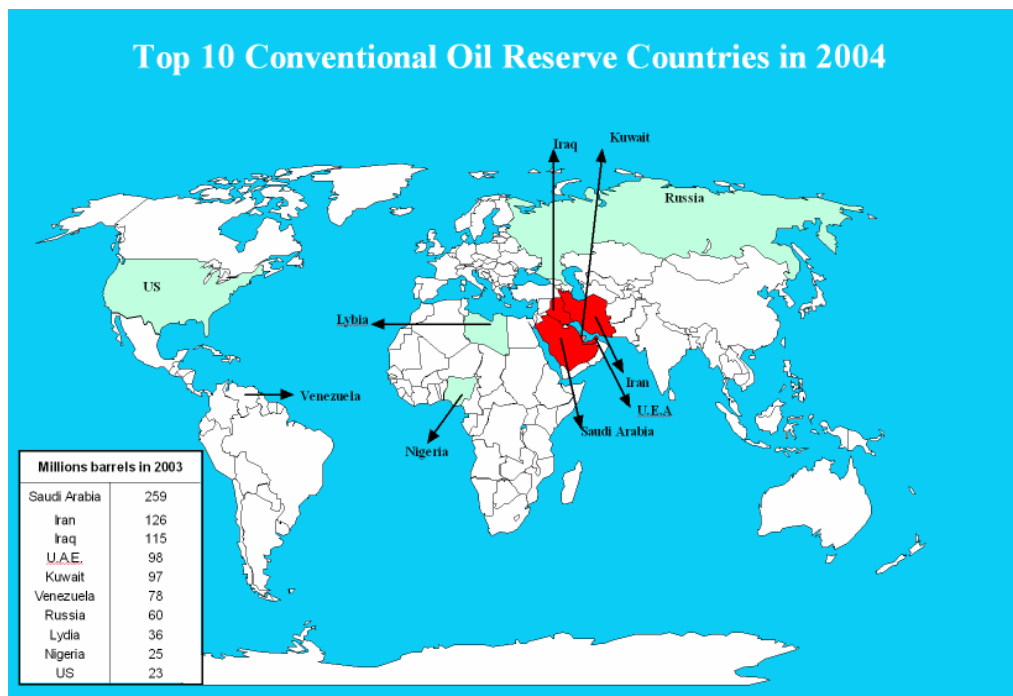


# 1 Improving the impact assessment - capturing the full scale of the policy

# A Address asymmetry of cost and benefits

This is where our fuel costs will go to .....

... and this is where technology investment will take place

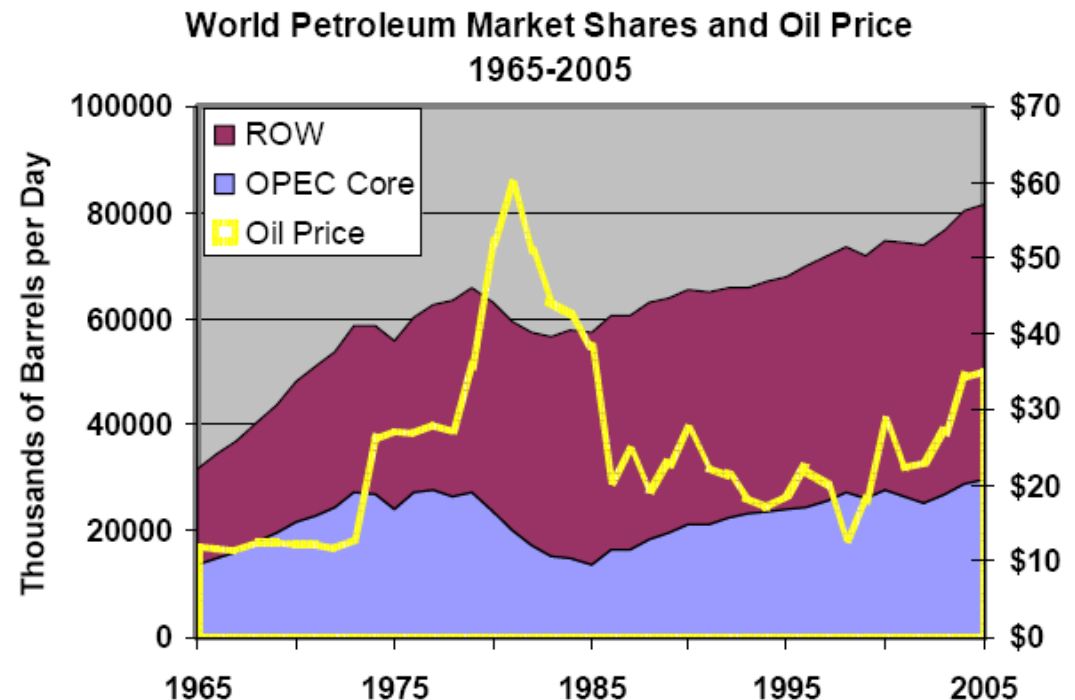
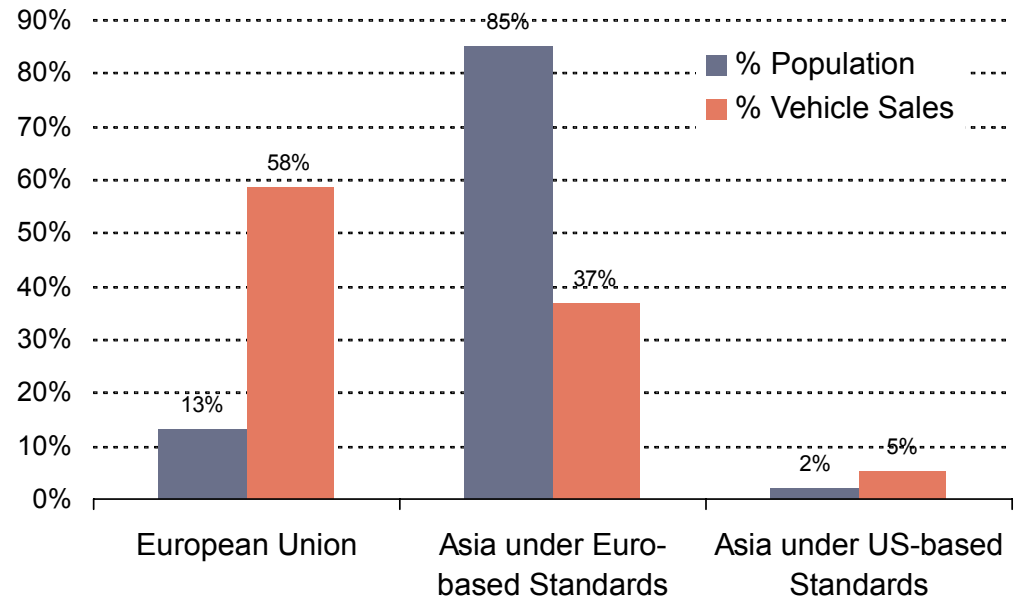


This is not about costs, it's about Europe plc's investment in the low carbon market, and in future climate and energy security

# B Address impact on oil market

European regulation is very influential, especially in Asia

lower oil demand = lower oil prices (= lower gas prices), with all the benefits for economy and trade balance



# C Address environmental impact of lower MARGINAL oil demand

## PROCESSES END USE

Crude Oil (avg.)

CO<sub>2</sub>

CO<sub>2</sub> CO<sub>2</sub> CO<sub>2</sub> CO<sub>2</sub> CO<sub>2</sub>

Tar Sands

CO<sub>2</sub> CO<sub>2</sub>

CO<sub>2</sub> CO<sub>2</sub> CO<sub>2</sub> CO<sub>2</sub> CO<sub>2</sub> CO<sub>2</sub>

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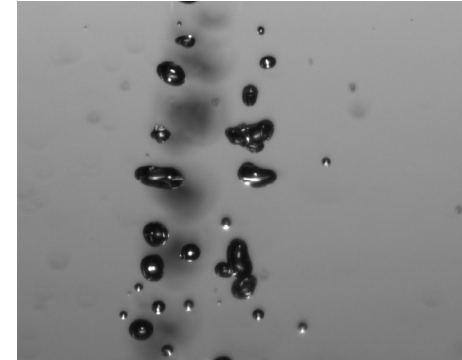
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# D Address impact of lower oil prices on coal/gas balance

- As oil prices have risen  
....
- ... gas prices have risen too (coupled) ....
- ... causing a shift back to coal in power generation





# E Address low carbon car

## *specifications* as compliance tool

- Current impact assessment only addresses low carbon *technologies* but assumes 'business as usual' car *specifications*
- Potential of technology PLUS specifications almost infinite

- Loremo: < 50 g CO<sub>2</sub> / km



- Shell EcoMarathon: 0.8 g CO<sub>2</sub> / km



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# F Address learning effect and mass production

- Early 1990s: 3-way catalysts were estimated to cost €700 (1990 prices)
- Current price is about 10% that figure (2007 prices)
- And quality is better !!

# Current assessment deeply flawed

Does it assess **costs** ...

...of low carbon car *technology* ?



Does it assess **benefits** ...

... of fuel and CO2 savings ?



... of technology investment in Europe?



... of changed car *specifications* ?



... of learning effects ?



... of lower oil and gas prices ?



... of lower oil (and gas) import bills ?



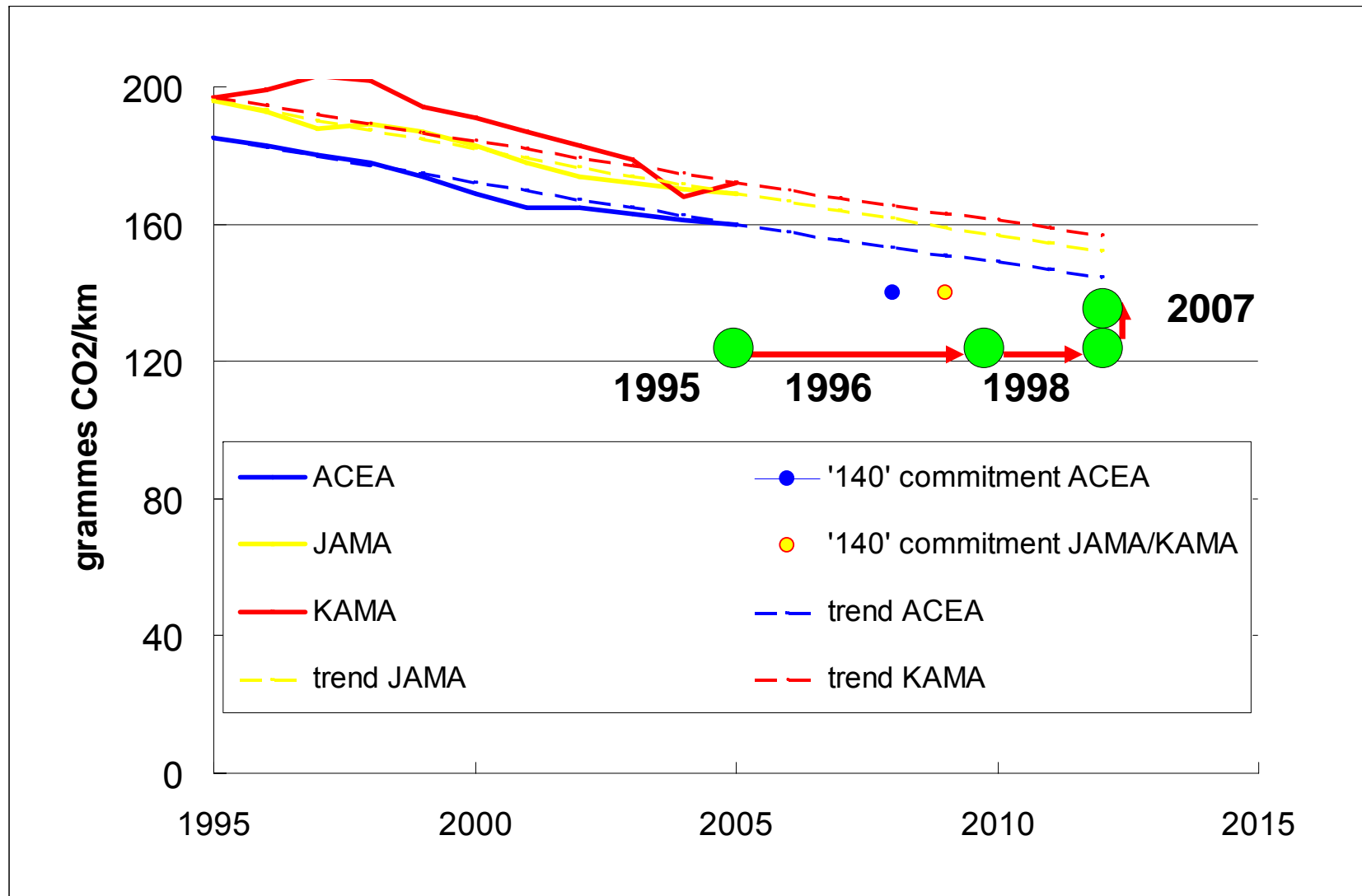
... of lower exploitation of dirty oil ?



... of a switch back from coal to gas ?



# 2 Targets and timetables

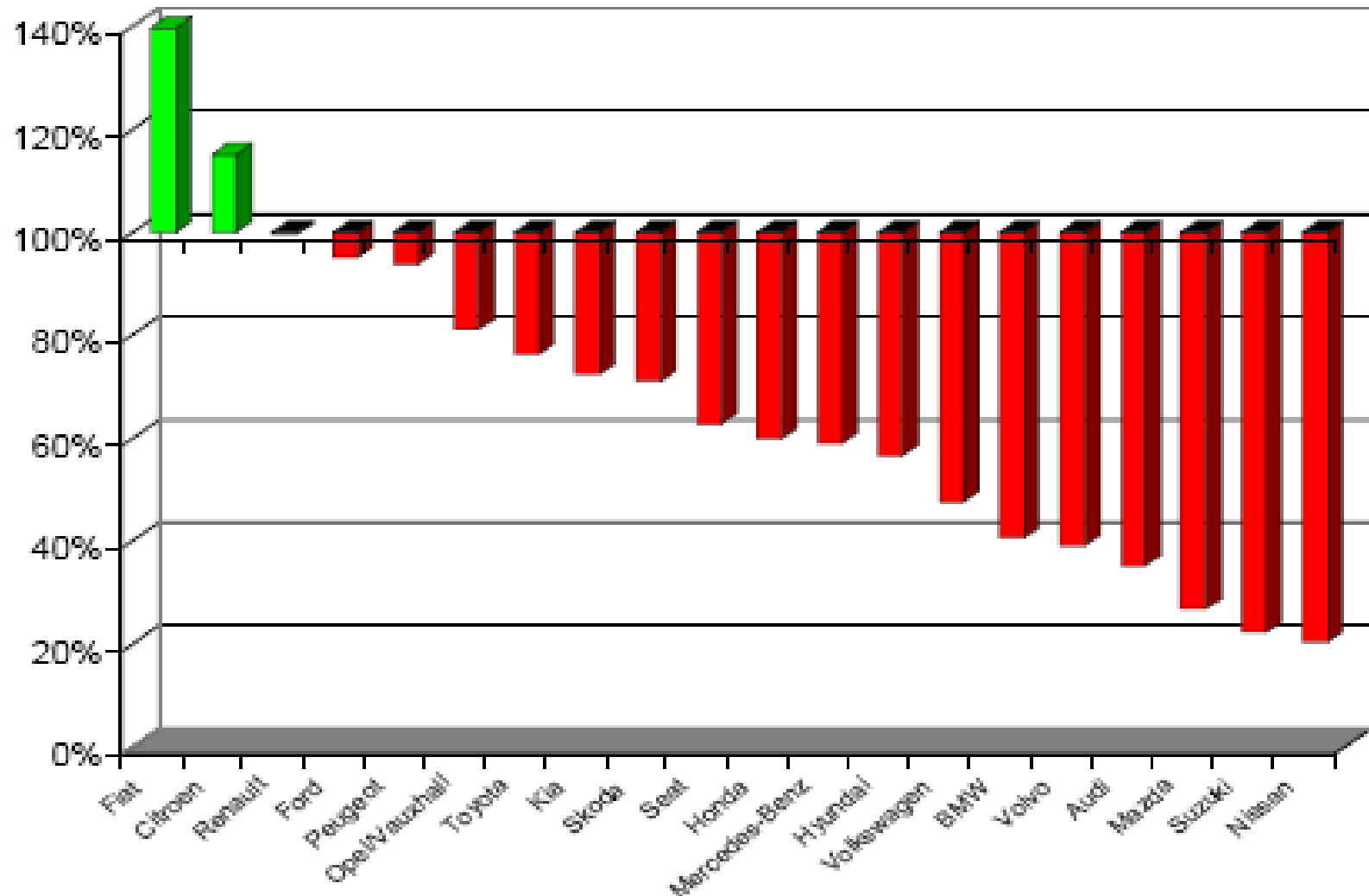


Leadtime 10→17 years

target 120→130 ...

# ...due to lack of regulation which led to 75% 'free riders'

- % of progress towards '140' achieved by 2005



# '120 by 2012' perfectly feasible

- impact assessment: 120 g/km by 2012 would only cost €19 per tonne of CO2 !!
- although it assumes cars will keep on gaining weight over time (NO lower carbon specifications)
- although it ignores learning effects

# Long term targets !!

- Absolute necessity from industry, climate and energy policy point of view
- 5% p.a. improvement: 80 g/km by 2020, 60 g/km by 2025
- **ACCEPT THAT TECHNOLOGICAL UNCERTAINTIES EXIST !!**
- Don't let impact assessment 'tyranny' hijack strategic policy making



# 3 The compliance mechanism

# Credibility

- Ambitious targets + weak compliance mechanism = business as usual !
- Compliance should NOT be achieved through access to external credits or compensation schemes

# On penalties

- In a penalty-based system the penalties should be high enough to ensure compliance
- €150 per g/km CO<sub>2</sub> per car seems appropriate, based on marginal abatement costs
- We do not want car makers to pay, we want more efficient cars !!

# 4 The class parameter

# A matter of principle

- Our fundamental belief is that standards should be independent of car class.
- More effective, more efficient, fairer, simpler: polluter pays
- At very least, **over time** standards should become independent of car class

# Utility parameter

- Utility parameter should
- be a fair representation of customer value
- **AVOID PERVERSE INCENTIVES** that make lowering CO2 more difficult and / or costly

# Therefore: parameter should be footprint, # seats or surface

	customer value	avoid perverse incentive	Total
weight	-	-	--
power	0	--	-
height	0	-	-
surface	+	0	0/+
<b>footprint</b>	+	+	+
<b># seats</b>	0	++	+



# To do

- 120 by 2012, 80 by 2020, 60 by 2025
- Set strict compliance regime
- Choose footprint or # seats
- Take the strategic and global outlook
  - the impact on the oil market
  - the impact on the car parts market
  - and what that does to Europe plc