EU Transport GHG: Routes to 2050 II

Development of a better understanding of the cost effectiveness of different policies and policy packages (Task 8)

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www.eutransportghg2050.eu

Partners

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Transport and Environmental Policy Research

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Aim of task 8

Assessment of cost effectiveness of CO_2 reduction options and policies

- Based on existing estimates from literature
- When possible: quantification, expressed in €/tonne of CO_2
- The cost include:
  - Capital cost
  - Changes in other cost
  - Energy cost savings (ex taxes; directly related to energy prices)
  - Valuation of co-benefits
  - Possibly also other impacts (e.g. consumer surplus)

Approach

- Focus on social cost perspective (not user cost)
- Methodology based on Report II previous project

- Meta-analysis of cost effectiveness estimates:
  - Quantification for specific technical reduction options short/medium term (2020)
  - Mainly qualitative assessment for non-technical reduction options
  - Qualitative assessment for the long term (up to 2050)

- Results form existing studies sometimes hard to compare:
  - Type of costs and benefits included
  - Energy prices
  - Estimates of costs and savings
- Therefore focus on data with transparent and traceable assumptions

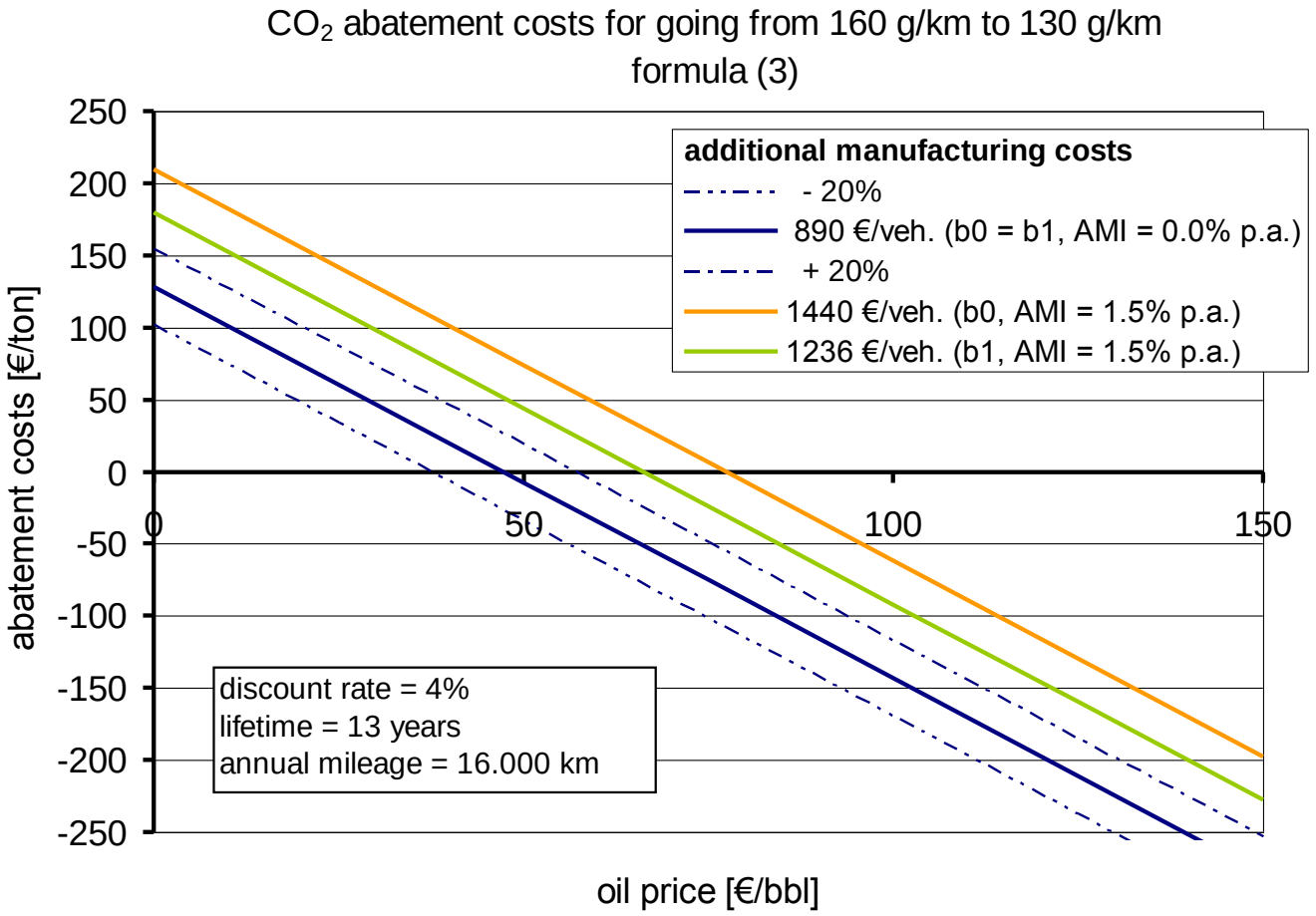
Illustrative example

- Investment: € 500; annual capital cost: € 60
- CO_2 saving of 10 g/km; 166 kg (70 liter fuel) per year
- Saved energy cost: € 50 (with fuel cost of € 0,7 per liter)

Cost effectiveness

- (€60 - €50) / 166 kg = **€ 60 per ton**
- With 20% lower fuel price: **€ 120 per ton**
- With 40% higher fuel price: **minus € 60 per ton**
- If also € 10 savings of air pollution cost: **minus € 120 per ton**

Sensitivity for oil price and reduction cost



Source: CE Delft, 2009

Any questions or comments…

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