



CO₂-Reduction from Cars - the battle of concepts

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Overview: Different Models for CO₂-Limits

- The fundamental decision: closed or open system
- Uniform limit: 130g for all new cars
- Closed trading
- Limit depending on footprint or weight + charge (Germany) or penalty (EP, Env Committee)



A choice already been made: open versus closed system

Open System: equalizes CO₂-reduction costs across sectors (e.g. by upstream ETS or linking sectoral ETS), but limits innovation drive for fuel efficient car

Closed System: Higher CO₂-reduction costs per car but offset by fuel-savings over use-life

Open Systems rejected by almost all actors



Open Trading – SRU Model

Cap and Trade - but allows for trading with EU ETS

Key Advantage:

- *Narrow Efficiency:* CO₂-Reduction-costs similar to industry
- Establishes financial responsibility of car producers for Climate Protection
- Very strict benchmark possible

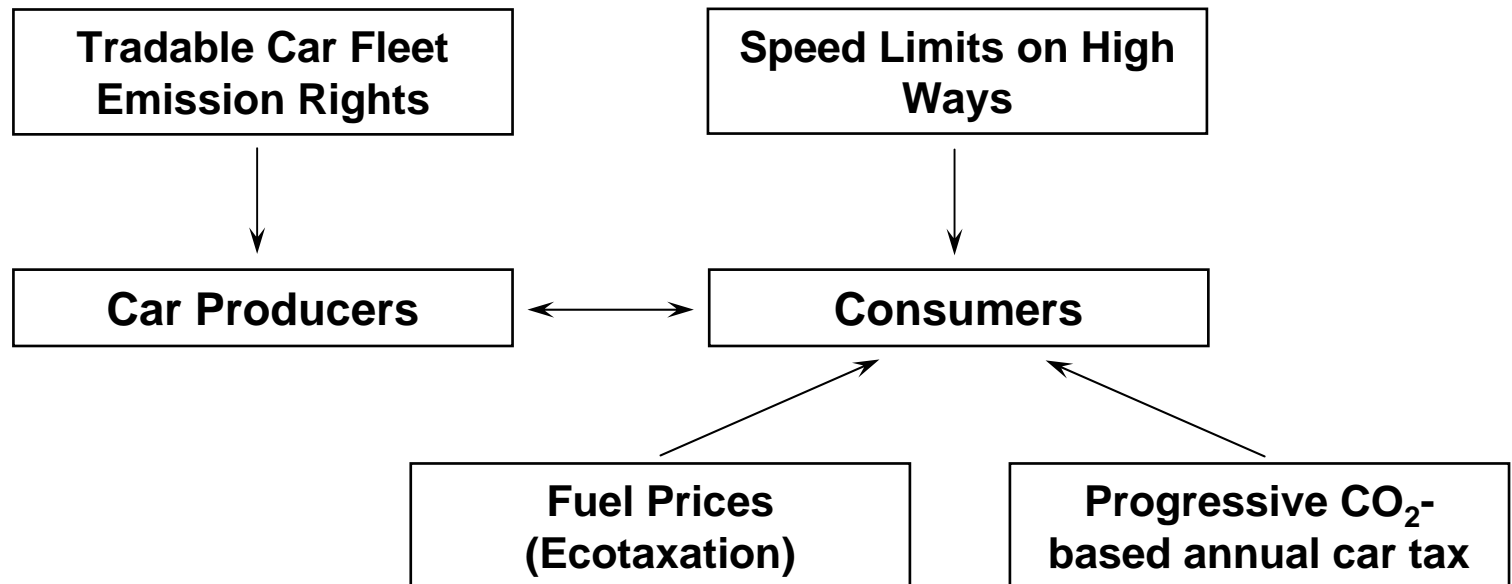
Key Problems:

- Only feasible after 2012 (rejected by Commission)
- Little innovation effect for car industry, as producers may buy emission rights from other sectors

—————→ **Better: in the long run Up-stream ETS**

Policy Mix for CO₂-Reduction from road transport – the SRU-Model

Target: 100 g CO₂/km in 2012



A uniform limit

- Does not consider different cost to come to the limit:
 - Excessive reduction cost for bigger cars
 - Competitive advantage for small cars
- No incentive to innovate below limit
- Phase-outs of “bigger cars” are politically unacceptable



Closed Trading (eg. Dudenhöfer-Proposal)

Cap and Trade Variant I: based upon uniform limit value:

Allows for trading between producers exceeding limit values and those below the limit values:

Key Advantages:

- strong innovation incentive for all car types
- Flexibility and low cost target achievement

Key Problem:

- *Acceptance:* Producers of big cars have to pay to their competitors:

—————→ **High level of conflict with car industry**

Closed Trading II (T&E-proposal)

Cap and Trade Variant II: based upon linear curve relating footprint to CO₂-Emissions or energy use

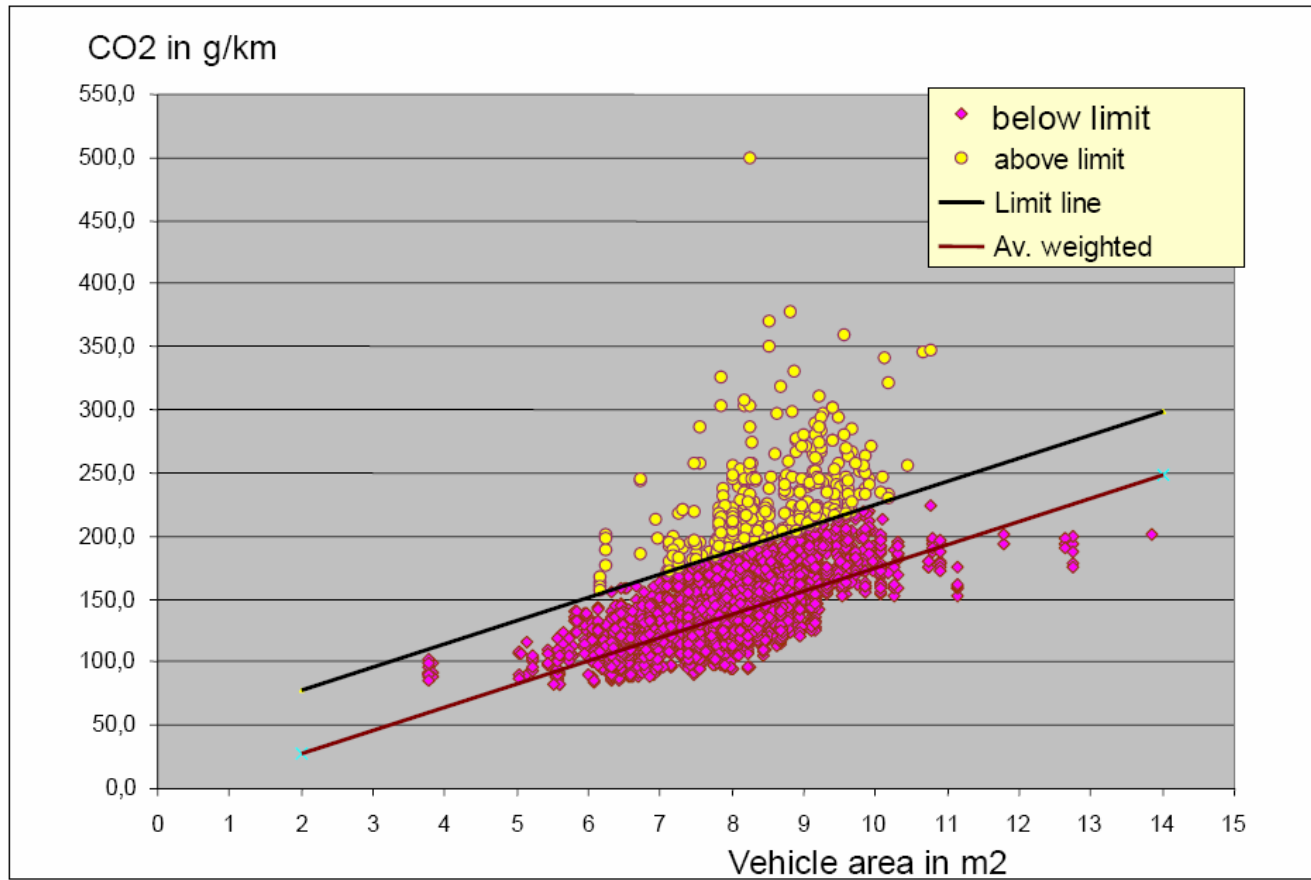
Allows for both: compensation within company and trading between producers exceeding limit values and those below the limit values:

Key Advantages over version I:

- Innovation incentive for all cars (but less than Variant I)
- Less trading between competitors necessary (more acceptance than variant 1?)

The footprint based limit value curve

Proposal for a CO₂-Limit





Footprint based limit value curve + penalty: the EP model

Key features: Compensation within a manufactures fleet, but no trading between car producers; High penalty in order to create incentives to move towards curve

Advantages:

- All Cars Types have to make an effort
- Enforcement by high penalty

Shortcomings and Risks

- No incentive to downsize car fleet
- Higher abatement lost – less efficiency than with trading
- Target achievement depends upon level and acceptance of penalty



Weight based benchmark (Car Manufacturers)

- Linear, but relatively flat function based upon vehicle weight
- Compensation between different models of one manufacturer possible, **but no trading**
- Additional flexibility over time
- Compliance system (penalty, charge etc.) still unclear!
- Targets and Timetables less ambitious

Conclusion

Open Trading based upon a flat footprint based curve has the merits of:

- **Relative Efficiency**
- **Target compliance security**
- **Incentives to downsize the car fleet**
- **But: takes into account different car sizes and functions**
- **Allows for trading but limits the need for trading**