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EU Transport GHG: Routes to 2050?

Road transport pricing
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Partners

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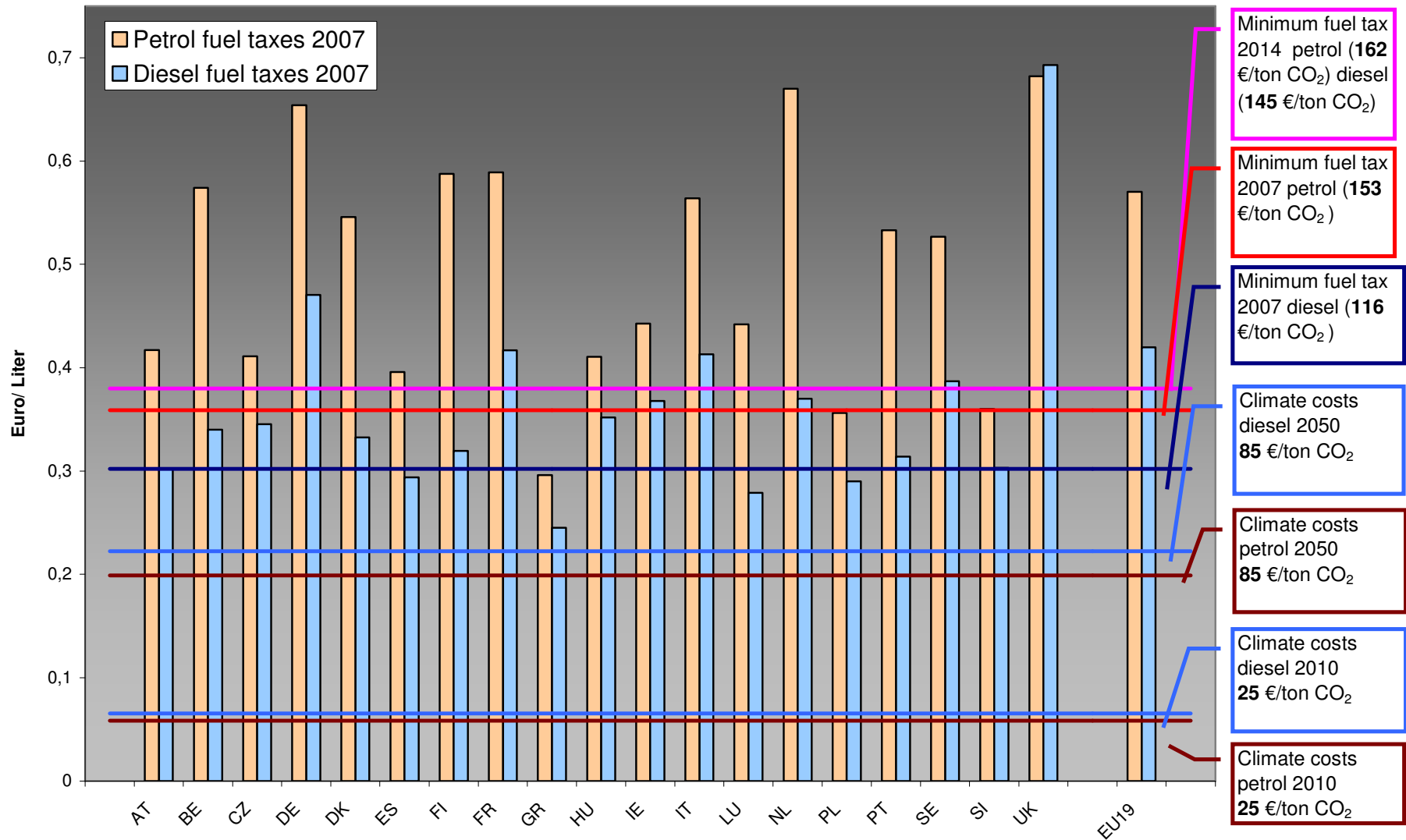
Overview of presentation

1. Fuel tax
2. Kilometre charges and tolls
3. Vehicle purchase and circulation taxes
4. Parking fees
5. Company car taxation
6. Conclusions/discussion/questions

Carbon tax on road fuels

- Give incentives for all types of fuel reduction
- Existing excise duties exceed external cost estimates of CO₂ (depending on cost estimates)
- Very rough estimate: carbon tax of € 85 per tonne: about 10% long term GHG emission reduction
- Excise duties have various functions:
 - Fiscal function (general tax)
 - Infrastructure financing
 - External cost of energy supply
 - Environmental function

Current road fuel taxes EU



Pros and cons of additional road fuel taxes

- Pros
 - Give incentives for all reduction options
 - Current levels may be insufficient to meet long term climate goals
 - Many co-benefits, particularly reducing oil dependency
 - Also reduces congestion and other externalities, but less effective than km-charges because not possible to differentiate
- Cons
 - Risk of welfare losses of over-taxation
 - Lack of public support
 - Unfair competition at national borders in case of high price differences between Member States
- EU harmonisation:
 - Commercial diesel proposal (2005): increase of minimum excise duties
 - EU carbon tax on fuels?
- Cap&trade emission trading scheme might be alternative way to increase fuel prices

Kilometre charges and tolls (1)

- Perfect way to charge for:
 - (variable) infrastructure cost
 - Congestion (when differentiated to location and time of day)
 - Noise (when differentiated to location and time of day)
 - Air pollution (when differentiated to location and emission standard)
- Can also provide incentives for GHG reduction:
 - Curbing down transport growth
 - Can be an effective and efficient way of congestion reduction, without inducing extra demand
 - Differentiation by vehicle fuel efficiency
 - Reduction potential all road transport (estimates for the NL, relatively high charges): 15% (including congestion charge, without differentiation to fuel efficiency)

Kilometre charges and tolls (2)

- EU: current km-based charges cover only 13% of km-related cost
- GHG reduction maybe not primary aim: to be regarded as co-benefit?
- Main barriers:
 - HGV: Eurovignette Directive
 - Cost of charging systems
 - Fear for adverse economic effects (but net welfare gains can be expected when designed properly; in NL € 1.5 bln/yr, big three € 30 bln/yr)
- When applied to all roads for all vehicles overall impact on GHG reduction can be significant (estimated at 5-10%)

Vehicle taxation

- Present in many countries
- Main types:
 - Registration or purchase taxes
 - Annual circulation taxes
- Two mechanisms:
 - Reduction of car ownership and vehicle-kms (uniform taxes)
 - More fuel efficient fleet (when differentiated to fuel efficiency)
- Impacts:
 - Long term impacts on car ownership and mobility patterns
 - Not much quantitative information on GHG impacts
 - Smart differentiations can have significant impacts on vehicle fleet
 - Co-benefits on land use (parking space) and other externalities
 - Barrier: possible adverse economic effects of limiting car ownership (welfare and automotive industry)

Parking fees

- Impact on car ownership and car use
- Might be differentiated to fuel efficiency, together with of broader tax/charge differentiations
- Particularly effective in urban areas
- Long term impacts on mobility patterns in urban areas (including shift to slow modes)
- Since small share of trips, overall limited GHG reduction potential

Company car taxation

- Possible contributions:
 - Improving fuel efficiency, e.g. by differentiating
 - Reduce (private) use of company cars
- High impact on vehicle fleet: 50% of new cars bought by companies
- Existing schemes show high impacts (UK and NL)
- Can be important flanking instrument to improve fuel efficiency
- Perverse incentive for private use of company cars:
 - No or very low marginal cost for users
 - No good practices for limiting
 - Long term option could be to use km-charging schemes

Main conclusions

- Fuel tax or emissions trading first best
- Km-charges
 - first-best for reducing externalities, including congestion without inducing more traffic
 - GHG reduction is a co-benefit, particularly when applied on all roads
- Many flanking instruments:
 - Vehicle taxation
 - Parking fees
- Many co-benefits
- Possible adverse economic effects main barrier

Issues for the discussion

- Is an additional fuel tax on road fuel or emissions trading appropriate?
- Do agree that GHG reduction is not the primary aim of kilometre charging, but important co-benefit of such a scheme?
- Which of the other instruments should be considered?
- How could main barriers be addressed?