European railways support 'user pays' and 'polluter pays' 

Dr. Libor Lochman, CER Executive Director

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Each transport mode should cover its marginal costs, both for infrastructure wear and tear (‘user pays’) and for external costs, e.g. for air pollution and noise pollution (‘polluter pays’) ... Applying those two principles EU-wide will help address the current charging discrepancy between transport modes.

European Parliament

Item 18 of resolution of 14 December 2017 on a European Strategy for Low-Emission Mobility
Efficient transport requires charging *direct* or "marginal" cost of infrastructure use:

- For rail, this rule already exists in EU law (SERA directive art. 31.3)
- For other modes, no such rule currently exists
- Road charging: 'Eurovignette' revision is welcome, but should add direct-cost coverage as a rule

Direct-cost charging achieves 'user pays' (as pointed out in EP resolution)
Getting the price right for efficient transport (2)

- Direct-cost charging is *distance-based* – but we don't always have this in the EU:

![Distance-based infrastructure charging rail versus road](chart.png)

- So let's go for distance-based charging for infrastructure use in *all* modes
Getting the price right for sustainable transport (1)

- Sustainable transport requires a fair chance for clean modes to compete
- Rail is a relatively clean mode of transport, with especially low climate externalities:

![Graphs showing specific CO₂ emissions](image)
Getting the price right for sustainable transport (2)

- Approach 1: *internalise externalities* by charging for CO2 etc. ('polluter pays')
- Approach 2: limit infrastructure charging for clean modes
  2a) by compensating them for unpaid externalities of competing modes (see SERA directive art. 34)
  2b) by limiting recovery of infrastructure fixed costs (consistent with 'user pays', which requires recovery of direct costs)
- Go for approaches 1 and 2b asap, but during the transition also apply 2a
CE Delft study for DG MOVE: total costs per passengerkm

- Political meddling keeps rail infra costs high, e.g. in rural areas with few passengers and few daily trains
- Average costs of rail as transport system **backbone** are much lower. Just look at rail freight!

<table>
<thead>
<tr>
<th>Mode</th>
<th>Costs</th>
<th>Taxes and charges</th>
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<tbody>
<tr>
<td>Passenger car</td>
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<td>Bus</td>
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<td>Aircraft</td>
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Legend:
- Accidents
- Air pollution
- Climate change
- Noise
- Congestion
- WTT
- Habitat
- Infrastructure
- Taxes and charges
Study: total costs per tonne-km

- Freight markets are highly competitive and much less affected by political meddling than passenger railways
- Rail freight's cost coverage gap is just ~3.5 €-cent/tkm – on par with IWT, but well below road's ~5 €-cent/tkm. (Thus, applying SERA directive art. 34 makes sense!)
Study: variable costs = proxy for marginal costs

- Rail is a leader in minimising the gap in marginal costs. These matter most – both to the EP and to economists.
Implementing 'user pays' in a socially just manner

- **Passengers:**
  - Coaches cause wear and tear, similar to trucks
  - Tolling (like charging passenger trains for track use), perhaps €0.20 per 100 passenger-km (DE estimate), would not look unbearable

- **Freight:**
  - HDV tolling impact on consumer prices 'negligible' (around 0.5%) acc. to 2016 study by Fraunhofer
  - Any particular hardship could be addressed with part of tolling revenue
Conclusions

- European railways support 'user pays' and 'polluter pays' – for fair competition between transport modes
- User pays: look at marginal costs
- Preliminary results suggest rail is a leader in covering them
- Implementing 'user pays' also on roads can be done in a socially just manner
For further information:

Dr. Libor Lochman
CER Executive Director
Tel: +32 (0)2 213 08 71
E-mail: libor.lochman@cer.be

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