

Save energy and reduce CO₂ emissions: By consistently switching to combined road-rail transport

Background:

Goods transport by road, rail and inland waterway in the EU (plus Great Britain, Switzerland and Norway) causes around 275 million tons of CO₂ equivalents per year* - that is about one third of the total transport emissions on the continent. A considerable share of these CO₂ emissions is caused by the classic transport of goods by truck from door-to-door (unimodal trucking).

As early as 2003, a study carried out with EU funding - as part of the PACT program - concluded that a switch from the dominant unimodal road transport to combined road-rail transport could reduce CO₂ emissions by about 45 percent on average. As in Europe the environmental awareness as well as the technical possibilities have increased since this first study, the International Union for Road-Rail Combined Transport (UIRR) has conducted a recent study to investigate the current potential for saving CO₂ emissions by transporting goods door-to-door in combined transport. d-fine GmbH (Frankfurt/Germany), which was commissioned with the study, has analysed ten heavily used Trans-European transport routes – as Rotterdam-Vienna or Ludwigshafen-Barcelona – in order to gain realistic and practical insights. The methodology is based on the eight market-leading CO₂ calculators and on the current energy mix.

Core findings of the study:

This study shows that, compared to unimodal road transport, combined door-to-door transport can contribute significantly to reduce energy consumption as well as current CO₂ emissions. In detail:

- Energy consumption on the ten routes studied would drop between 43 and 71 per cent.
- CO₂ emissions could even be reduced by 63 to 90 percent.
- The currently determined results thus show a considerable potential for improvement compared to the study from 2003.

Basis for the significantly higher possible reductions in energy consumption and CO₂ emissions are a much better energy efficiency and a higher use of zero-carbon energy.

Looking to the future: further progress more than possible

The future prospects of door-to-door combined transport are promising:

- A rapid and short-term improvement does not require scientific breakthroughs. Due to a high degree of electrification, combined transport can use electricity from renewable sources.
- The technology for complete electrification is already available today.
- The CO₂ balance improves from year to year by the proportion by which electricity from renewable energies increases in the energy mix of European countries.
- Intermodal transport stakeholders are fully committed to full electrification in order to use renewable electricity for their transport services.
- Major transshipment terminals have already started to establish zero-emission operations. For example, Samskip's Duisburg terminal.
- Some operators are already offering zero-emission transports, e.g., Metrans and DB Cargo

Conclusion: The opportunity for a carbon-free future of European transport is ahead of us - if we seize it now.

*= (<https://www.vcoe.at/publikationen/vcoe-factsheets/detail/vcoe-factsheet-2020-06-gueterverkehr-auf-klimakurs-bringen>)