


Welcome!

Workshop Energy Efficiency and CO₂



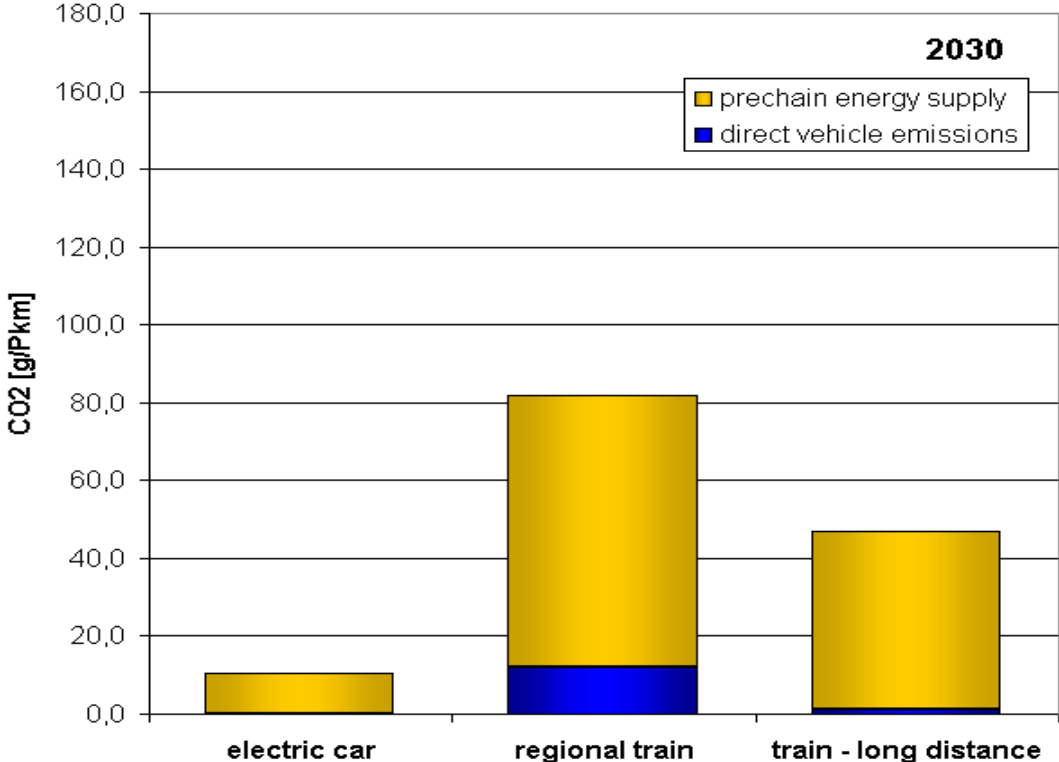
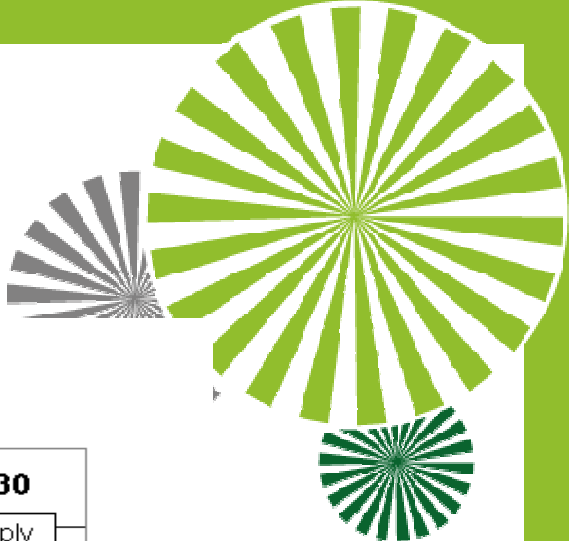
Overview

- Introduction – Henning Schwarz
- Energy and CO₂ performance of the rail sector and further reduction strategies – Raimondo Orsini
- The Railenergy Project – Mads Bergendorff
- Technical Recommendations – Enno Wiebe
-  Spanish High Speed Trains: Energy Efficiency in operation - José Antonio Jimenez



Competitors Outlook 2030

Electric cars supplied by green energy could turn railways the bad guy ...



Source: Öko-Institut, DLR: Renewbility



Background - Political Priorities

- Commission President Barroso stated in September 2009 that lowering carbon emissions and tackling those from transport in particular as a key action for the new Commission
- The new Commissioner for Climate Action, Connie Hedegaard, made clear that a package on transport and climate change measures would be a priority for her
- The EU Environment Council in October 2009 agreed on the need to set a long-term target for emissions reduction at EU level, specifying a reduction target of 80-95% by 2050



Consequences

Need for

- a strong commitment of railways towards a sustainable leadership in the transport sector
- a long-term environment and sustainability strategy for after 2020
- efficient activity planning of the whole rail sector to keep our pole position and being the mode of choice also in 2050
- to start the innovation process today, due to the long life cycle of rail vehicles and assets



Discussed targets 2030 & vision 2050



Climate Protection

• Target 2030

- Reduction of specific CO2 emissions from train operation by **50%** compared to base year 1990; measured per passenger-km (passenger service) and gross tonne-km (freight service).
- not exceeding total CO2 emission from train operation in absolute terms even with projected traffic growth compared to base year 1990.

• Vision 2050

- European railways will strive towards **carbon-free** train operation by 2050



Discussed targets 2030 and vision 2050



Energy Efficiency

- **Target 2030**

- Reduction of specific final energy consumption from train operation by **30%** compared to the base year 1990

- **Vision 2050**


- European railways will strive towards **halving** their specific final energy consumption from train operation by 2050 compared to the base year 1990; measured per passenger-km (passenger service) and gross tonne-km (freight service).



The key question for the workshop: How to achieve these targets?



Presentations

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