

Greening logistics with Technology

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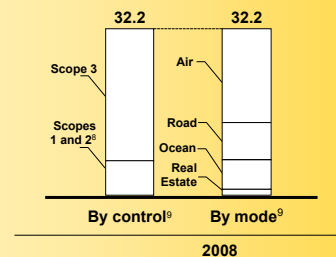
- The postal service for Germany. The logistics company for the world.
- € 46 bn revenue in 2009
- 500.000 employees worldwide
- 315 airplanes
- 120.000 ground transport vehicles

BIG PLAYERS IN CO₂ FROM DAX 30 AND LOGISTICS INDUSTRY

DPDHL is one of the few logistics companies reporting scope 3 emissions

Company	Emissions [million tons CO ₂]
e.on	147.5 ¹
RWE	145.0 ¹
Deutsche Post DHL	32.2 ²
Lufthansa	24.2 ¹
LIAS	20.7 ³
Henkel	15.8 ⁴
Linde	14.4 ⁵
Bayer	7.6 ³
Telekom	6.1 ⁶
SIEMENS	4.0 ³
DAIMLER	3.6 ¹
Deutsche Telekom	2.6 ⁷
FedEx	2.3 ⁵
TNT	2.7 ³

DPDHL carbon footprint 2008

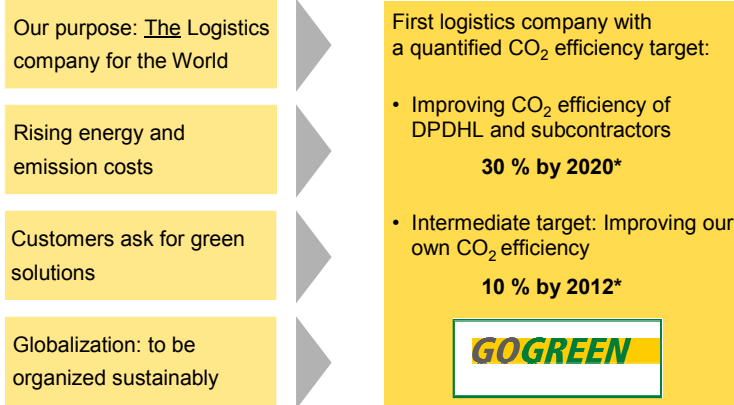


1 externally reported excluding suppliers on basis 2008
 2 incl. scope 1-3 on basis 2008
 3 externally reported including suppliers on basis 2008
 4 externally reported excluding suppliers on basis 2004/2005
 5 externally reported including suppliers on basis 2007
 6 externally reported excluding suppliers on basis 2006
 7 externally reported excluding suppliers on basis 2007
 8 owned or leased operations and real estate
 9 including consolidation
 Source: company sustainability reports or web sites, focus on DAX-30 companies that are reporting externally, Green Team

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RATIONALE FOR GOING GREEN

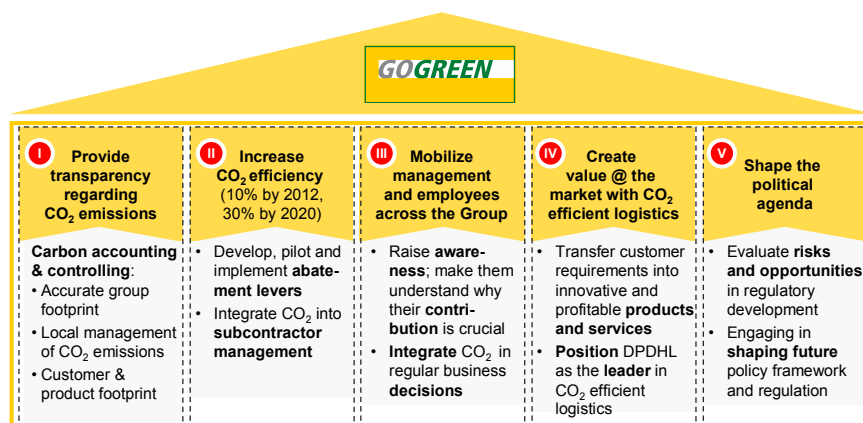
On the way to a low-carbon economy DPDHL is part of the solution



*compared to 2007

OUR GREEN HOUSE

Leveraging the potential of DPDHL, GoGreen improves CO₂ efficiency and sets leading-edge standards in green logistics



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CHALLENGE EFFICIENCY IMPROVEMENT

DPDHL tests various new technologies and solutions at an early stage, but there is no silver bullet for efficiency improvement in logistics yet



INCREASE CO₂ EFFICIENCY

We are improving our carbon efficiency with abatement levers in the areas of vehicles, real estate and network

Vehicles	Real Estate	Network
<ul style="list-style-type: none"> Bio fuel technologies Hybrid Trucks Electric vehicles Teardrop trailer Environmental friendly company cars 	<ul style="list-style-type: none"> Innovative energy concept Efficient lighting and heating systems Photovoltaic, solar panels, hange of energy mix, etc. 	<ul style="list-style-type: none"> Consolidation points such as Packstation Network & route optimization Modal shift, e.g. air to road Load factor/ capacity optimization Supplier Management

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TECHNOLOGY MIX

To identify the optimal tailored solution for DPDHL fleet a mix of efficient market solutions needs to be tested

BURN CLEAN

FUELS




2nd generation 4th generation
3rd generation

} **VANS**

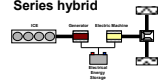
} **TRUCKS**

AERODYNAMICS

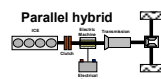


HYBRID DRIVE NEW / RETROFIT

Series hybrid




Parallel hybrid




ELECTRONICS

Eco Chip Tuning




Driver assistance/ education

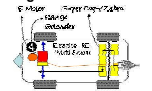


ELECTRIC DRIVE NEW / RETROFIT

Battery electric vehicle



Range extender



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Donnerstag, 19. April 2010

Example - CO₂-Efficient Fleet Technologies in DPDHL

Aerodynamics

Don-Bur Teardrop Trailer



Technology description:
aerodynamically optimized trailer in teardrop shape

Usage:
transport of freight within DHL Supply Chain UK

Timeline:


- testing finished in 2009
- trailer announced as DHL standard trailer for UK
- introduction to europe mainland in progress

Main findings:

- trailer run without any problems in UK
- CO₂-Reduction of 10-15%
- introduction to europe mainland limited to special purposes - higher height of the trailer conflicts with bridge heights on mainland

Hybrid vehicles

Daimler Atego Hybrid 12t



Technology description:
combination of conventional combustion engine and electric motor in parallel mode

Usage:
transport of roll containers for letters and parcels within DEUTSCHE POST MAIL business

Timeline:

pilot with 5 Daimler Atego 12t hybrid prototype trucks started in February 2009

Main findings:

- vehicles run without any problems under the restriction of a small payload
- first consumption data show significant decrease in consumption

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Example - CO₂-Efficient Real Estate Technologies in DPDHL

situation

- Lighting in industry halls is not adapted to needs
- Automatic heating control on the demand side is not in place
- Heating and cooling systems run without steady control in regard to energy efficiency
- Energy consumption cannot be tracked

complication

- High energy costs of several hundred million € per year in DPDHL)
- High related CO₂-emissions
- Waste of resources
- 33,7 Mio qm building area
- ca. 14.000 sites

solution

- Making electrical appliances "intelligent" by inserting a chip in every electric appliance and thereby providing the possibility for control and communication via the existing electricity grid: **digitalSTROM**
- using a WEB Platform for control options.
- Testing and developing application possibilities for DPDHL



Functionalities of digitalSTROM

- Dimming according to daylight intensity
- Flexible setting for zones according to needs
- Flexible switching of zones also independent of switches
- Application of movement- and noise-detectors
- Improved use of own renewable energy
- Monitoring of the electricity consumption
- Adaption of flexible demand side electricity use to when electricity is cheap

Example - CO₂-Efficient Network Technologies in DPDHL

DHL Smart Truck

- SmartTruck, an **intelligent pick-up and delivery vehicle** for optimized tour planning and optimized usage of vehicle capacity
- Combination of innovative technologies
 - dynamic tour planning system
 - traffic information
 - RFID in delivery vans and in depot sorting process
 - GPS tracking
 for more transparency within the process chain for Deutsche Post DHL Business Units, sender and recipient
- On-board navigation support to allow flexible courier rotation
- Improved and more flexible pick-up and delivery service
- Reduction of driven tour-km, CO₂ emissions and transport costs due to dynamic tour planning



SMART TRUCK: THE GREENER AND BRIGHTER WAY

EU needs an integrated approach to enhance sustainability for logistics

Improving our industry's efficiency – with the support of an integrated EU policy approach

EU Logistics sector equals € 1 trillion annual revenue with a 10 to 30 % efficiency improvement equals € 100 - 300 bn less annual cost for industry

Complete Single Market for Transport

- Speeding-up implementation of Single European Sky II (12 % CO₂ reduction in aviation)
- Over 30% empty trucks but EU restricts Liberalization of Road Cabotage
- Need to fully liberalize cross-border rail freight to make this mode attractive to customers

Tackle congestion at its real source

- 80% of congestion caused by passenger cars but EU price regulation only for trucks
- Get rid of night ban for trucks instead and avoid discrimination
- Re-invest revenues into road infrastructure
- Overcome myths on truck measures (EMS)

Incentives & Research for ITS

- Incentives for ITS (Intelligent Transport Systems) and ICT solutions
- Research for solutions which will be affordable for industry
- E.g. supporting the development of solutions related to Galileo

Conclusions

Integrated Policy Approach – what do we need?

- High Level Stakeholder Forum for Logistics (HLG)
- EP Think Tank for Logistics with TRAN, IMCO, ENVI, ITRE, LIBE
- Complete a true Single Market for transport
- Reduce complex and unnecessary regulation
- Incentives for all modes of transport
- One EU/Global standard for carbon measurement and accounting
- De-carbonising transport can be a win-win for the Climate and the industry

Alliance for European Logistics - AEL

Hitachi (Hitachi) Ltd.



Members



contacted for possible Membership

