Carbon Footprint Calculation and Reduction Assessment

Introduction

Eindhoven University of Technology and LHC Consulting partnered together to research the impact of carbon emission pricing on supply chain design. To support detailed supply chain analyses a database application has been developed and tested to calculate carbon emissions over multiple modes of transport. The project team developed a carbon footprint calculation methodology building upon the Swedish NTM[1] protocol to account for multiple supply chain specifics such as cooling and heating, vertical handling at intermodal hubs, load factors and shared distribution networks.

Benefits

- Measure the environmental performance and impact of logistics activities within the supply chain suitable for environmental reporting and analysis
- Focus attention to areas in the supply chain that should be addressed to cost effectively reduce the carbon footprint
- Understand the range of solutions available to reduce the carbon impact of transport and distribution activities
- Gain practical insights through scenario analysis on specific supply chain structures and sourcing alternatives
- Evaluate impact of future legislation, carbon taxes and environmental legislation on the supply chain design

Capabilities

- Batch processing of multiple transport lanes including automated distance calculations
- Accounting for differences in load factors, country specifics and shared network structures
- Multiple levels of reporting based on availability of data in accordance with multiple protocols: NTM, GHG Protocol[2], Defra[3] and Bilan Carbone ADEME[4]
- Opportunity assessment of rerouting transport lanes and modal shift alternatives
- Cost-benefit analyses of multiple emission reduction scenarios

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More information

For more information about the carbon footprint application and related consultancy services contact Richard van Dijk at LHC Consulting: info@lhc.nl or +31 40 293 86 16.

[1] NTM - Nätverket för Transporter och Miljön, www.ntm.a.se
[2] GHG - Greenhouse Gas Protocol, www.ghgprotocol.org
[3] Defra - Department for Environment, Food and Rural Affairs, www.defra.gov.uk
[4] Bilan Carbone ADEME - Agence de l'Environnement et de la Maîtrise de l'Energie, www.ademe.fr