Green corridor in the North Sea Region High Capacity Transport Corridor (HCTC) - GreCOR

KeyWords: Low emission technologies; Environmental standards and policy; Interoperability and standardisation, vehicles, infrastructure

The High Capacity Transport Corridor (HCTC) is a pilot project, promoting co-modal transport in the North Sea Region as one of the four GreCOR pilots. GreCOR - Green Corridor in the North Sea Region promotes the development of co-modal transport in the area ranging from Oslo, Norway to Randstad, a conurbation consisting Amsterdam, Rotterdam, The Hague and Utrecht in the Netherlands. Other main cities of the area are Gothenburg, Oresund in Sweden and Hamburg in Germany.

Benefits:
- New flexible truck engines capable of using Liquefied Natural Gas (LNG) /Liquefied Biogas (LBG) and regular diesel
- From 20% up to 80% reduction in CO2 per tonne-km emissions.
- LNG specific CO2 emission is 20% smaller than diesel

Success Factors:
- LNG has slightly smaller environmental effects than regular diesel.
- LNG’s specific CO2 (56 g/MJ) emission is 20% smaller than diesel.
- LNG causes no SO2 or particle emissions
- Improved transport efficiency by 60 t max weight

Supported Strategic Targets:
- Reduced emissions
- Ideal utilisation of infrastructure
- Competitive logistics and transport system
- Increased efficiency and productivity of logistics processes
- Image

Starting Point/Objectives/Motivation:
The Nordic region is sparsely populated area which means long transport distances. Trucks are using regular diesel and truck loads are smaller compared to GreCOR. European Modular System (EMS) vehicles aren’t widely used in Europe. Volvo’s new motor technology enables usage of liquefied gases in diesel trucks. LBG has no environmental effects in principle. True lifecycle effects depend on manufacturing technology and materials used. Vehicle and fuel technology is supporting reduction of emissions from road traffic.

Solution
The High Capacity Transport Corridor (HCTC) is based on three technological issues: the European Modular System (EMS), Intelligent Transport Systems (ITS) and a methane-diesel tractor able to use liquefied natural gas (LNG) and liquefied bio-gas (LBG) and regular diesel. PostNord Logistics and Volvo LNG/LBG vehicles will route between Gothenburg and Oslo for the first stage pilot. Vehicles are EMS vehicles (25,25 m long and 60 t max weight).
EMS trucks are able to carry standard size loading units (semitrailers and containers). Bigger maximum weights compared to common maximum weights in central Europe (40/44 tonnes) increase productivity and energy efficiency. The role of ITS in the HCTC concept is to support the driver towards achieving greener road transports. One of these aspects is to combine loads and get higher payload.

Case Description (Cont.):
The final goal of GreCOR is to create fully functional High Capacity Transport Corridor within the whole Oslo-Ranstad area. ITS services will support greener road transports by e.g. combining loads. Higher payload in addition to more flexible motor technology will result from 20 % up to 80 % reduction in CO₂ per tonne-km emissions. Volvo is also investigating problems related to transport efficiency in the corridor. In addition to PostNord Logistics, Volvo also investigates other transport companies’ problems.

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More information:
Main mode involved
• Road

Main actors involved
• Logistics operators (PostNord Logistics)
• Truck manufacturer and project managers (Volvo)
• WP leader and Coordinator (CLOSER/Lindholmen Science Park)
• Public authorities (Swedish Transport Administration)
• The Interreg IVB North Sea Programme

Transport mode or supply chain elements:

Case Description (Cont.):

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