To investigate the potential and feasibility of the electrification of vehicles for road freight transport and urban logistics, the following three topics are important to consider.

1. Vehicle and infrastructure technologies
2. Vehicle and infrastructure techno-economic analysis
3. Early niche markets and commercialization opportunities

Therefore, the scope is to give an overview of the current state of the art of (near) zero tailpipe emission vehicle technologies and freight transport task specific vehicle configurations. Transport task and possible infrastructure (charging/refueling) combinations as well as current state of infrastructure technology and infrastructure availability shall be discussed. Task relevant pilot projects shall be identified in order to analyze and discuss current experiences. In this context hurdles for deployment can be identified.

The examination and discussion of vehicle techno-economics regarding (near) early market applications will strengthen the discussion of hurdles for deployment and enable policy recommendations.

Exemplary key questions regarding the electrification of vehicles for road transport and urban logistics are:

- What is the status of alternative vehicles and infrastructure technology for road freight transport and urban logistics?
- Are there already (near) early markets?

Based on the scope, the Task activities aiming to:

1. Summarize the status of vehicle and infrastructure technologies, implementation and hurdles.
2. Identify early niche markets and commercialization opportunities
3. Provide policy recommendations for further research and deployment activities

The objectives set will be reached by the following working method. In general, the Task 27 should be reflecting a networking activity by the exchange of information and answers to questions from participating members.

Workshops:
External experts will be invited from industry, research organizations, and technology policy institutions around the world to refer and discuss about the topics of consideration.

Desk work:
Review of documents and data, providing information and assistance to pre- and post-processing operations.

Public outreach:
Working results will be published and discussed for example on conferences, within papers and within a final report.

In order to minimize oil dependency and the negative environmental impacts as described within the fifth assessment report of the Intergovernmental Panel on Climate Change (IPCC), emissions of Greenhouse Gases (GHG) from all sectors of the global economy have to be reduced. Not only national but also international activities have been grown in recent years to start reducing emissions from particular sectors of the economy. Whereas across the EU overall emissions of greenhouse gases are on a declining trend, emissions from the transport sector continue to increase. In particular, road freight transport is one of the fastest growing modes of transport and has an increasing share in the total GHG emissions of transport.

Various technical and non-technical options exist for reducing the GHG emissions of road freight transport, such as improving the efficiency of freight logistics or fuel consumption performance of vehicles. Current focus of vehicle industries is mainly on incremental technology developments to reduce fuel consumption of conventional vehicles. However, there may be potential for (near) zero tailpipe emission vehicles that could result in the large-scale GHG reduction that is needed.

Several projects investigate the potential of electrified transport logistic vehicles, with focus on short distance freight transport tasks with recharging/refueling at schedulable vehicle downtimes. The feasibility of different vehicle concepts is commonly proven based on performance criteria as range, total costs of ownership, usability, durability, reliability, etc.
IA-HEV

The Implementing Agreement for co-operation on Hybrid and Electric Vehicle Technologies and Programmes (IA-HEV) enables member parties to discuss their respective needs, share key information, and learn from an ever-growing pool of experience from the development and deployment of hybrid and electric vehicles.

IA-HEV was formed in 1993 to produce and disseminate balanced, objective information about advanced electric, hybrid, and fuel cell vehicles. IA-HEV is an international membership group collaborating under the International Energy Agency (IEA) framework. Implementing Agreements are at the core of the IEA International Technology Co-operation Programme coordinated by the IEA Committee on Energy Research and Technology (CERT).

An Implementing Agreement is a working group to encourage multinational system of standard rules and regulations to encourage multinational, collaborative efforts to meet energy challenges. This allows interested IEA member and non-member governments and other organizations to pool resources for research, development, and deployment of particular technologies.

For further information please visit:
http://www.ieahev.org/

Contacts

Operating agent:
Mr. Florian Kleiner
German Aerospace Center (DLR)
Institute of Vehicle Concepts
Pfaffenwaldring 38-40
D-70569 Stuttgart
Germany
Tel.: +49 711 6862 8120
E-Mail: Florian.Kleiner@dlr.de
www.DLR.de/IA-IA-HEV

Co-operating agent:
Mr. Martin Beermann
JOANNEUM RESEARCH Forschungsgesellschaft mbH
LIFE – Centre for Climate, Energy & Society
Elisabethstrasse 18/II
A-8010 Graz
Austria
Tel.: +43 316 876 1434
E-Mail: Martin.Beermann@joanneum.at

Partners

Deutsches Zentrum für Luft- und Raumfahrt
German Aerospace Center

Office for Low Emission Vehicles

Sabancı Üniversitesi

Rijwiel en Automobiel Industrie

Task 27: eLogV
Electrification of transport logistic vehicles