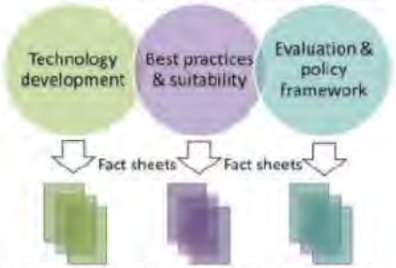
Task objectives

Task force 41 "Electric Freight Vehicles" of the IEA TCP "Hybrid and Electric Vehicle" (HEV) aims to monitor progress and review the relevant aspect for a successful introduction of electric freight vehicles (EFV) into the market. Three topic areas are comprises for this purpose:



The first area "technology development of EFV" addresses the technical viability of EFV. Based on current available EFV on the market, performances as well as standards and norms for EFV are described to monitor technical advances of EFV. The development of the charging infrastructure, in particular with regard to costs and availability, is also in focus.

The second area of interest deals with "best practice and suitability aspects of EFV" to identify potential application areas for EFV. Based on best practice pilot projects, successful examples of EFV implementations will be described. This includes on analysis of their opportunities and barriers for market introduction.

The third area looks at demand-side issues and is linked both to end customers and to policies. In view of the different suitability of EFV technologies for replacing conventional diesel engines, economical and ecological aspects of EFV will be evaluated. By using existing models, fleet Total Cost of Ownership and CO2-emission calculations for promising "vehicle - transport task" combinations with close-to-reality data are undertaken.

The topics of each focus area are presented in form of short fact sheets (1-2 pages), which will provide the base to review the aspects for a successful introduction of EFV into the market.

Working method

The scope of Task 41 includes vehicles of the size classes N1, N2 and N3 and all kind of electrified or electric powertrains like hybrid, plugin-hybrid, battery electric, fuel cell electric and electric road powertrains.

The working method comprises desk work, workshops and public outreach.

The **main approach** is to collect and exchange information in workshops and through contacts to other international networks and projects. Desk work will provide information for discussion e.g. on vehicle technology and cost developments. Public outreach activities such as presentation, scientific publication and flyers will disseminate the findings within the Task to a wider audience. According to the objectives, the workshops are aimed at professionals from manufacturers, TIER1 suppliers, researchers, project managers, city planners, policy makers and other stakeholders. The topics and the individual orientation of the workshops are determined by the Task partners.

Ways to participate: Participation in workshops is by invitation. Please contact the Operating Agent or the respective HEV-TCP country representative if you are interested to collaborate and join the network.

Benefits of participation: Participants of Task 41 will gain access to information in the form of reports, fact sheets and presentations. Participants will have the opportunity to network with colleagues and experts in the topics covered by EFV. Communication (public and restricted to the Task network) will be an important aspect of the Task work.

Task duration: April 1st 2019 to March 21st 2022

Motivation

Road freight transport is one of the fastest growing modes of transport and has an increasing share in the total GHG emissions of transport. Global trends such as growing population, urbanisation and booming e-commerce have almost doubled the worldwide road freight activity and energy use in the last two decades.

Furthermore, higher gradients are observed for freight emissions compared to passenger travel emissions for most of the IEA countries. Fleet target are recently set by the European Union for average CO2 emissions for light and heavy freight vehicles aimed at reducing the increase in freight emissions.

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 emphasis is on incremental technology developments to reduce fuel consumption of conventional vehicles.

However, there are potentials for (near) zero tailpipe emission vehicles that could result in the large-scale GHG reduction that is needed. In addition to global impacts, air pollutants are emitted locally through combustion of fossil fuels. This is a major problem in densely populated cities since road freight transport is responsible for the last mile delivery in these areas. Alternative delivery concepts can have an important contribution to sustainable urban logistics.

For more information see:

IEA HEV TCP

Established in 1974, the **International Energy Agency (IEA)** carries out a comprehensive programme of energy co-operation for its 29 member countries and beyond by examining the full spectrum of energy issues and advocating policies that will enhance energy security, economic development, environmental awareness and engagement worldwide. The IEA is governed by the IEA Governing Board which is supported through a number of specialised standing groups and committees. For more information on the IEA, see www.iea.org.

The **IEA Technology Collaboration Programmes** (TCP) are international groups of experts that enable governments and industries from around the world to lead programmes and projects on a wide range of energy technologies and related issues, from building pilot plants to providing policy guidance in support of energy security, economic growth and environmental protection.

Created in 1993, the activities of the **TCP on Hybrid and Electric Vehicles** (HEV TCP) are coordinated by the Working Party on Energy End-Use Technologies (EUWP). The aims of the HEV TCP are to produce and disseminate balanced information about advanced electric, hybrid, and fuel cell vehicles. The HEV TCP accomplishes this through running temporary Taskforces on dedicated topics of interest for member parties to discuss their respective needs, share key information, and supply objective information to support decision making. For further information on the HEV TCP see www.ieahev.org.

Contact

Operating agent:

Mr. Özcan Deniz
German Aerospace Center (DLR)
Institute of Vehicle Concepts
Stuttgart, Germany

Tel.: +49 711 6862 8637
E-Mail: oezcan.deniz@dlr.de

Participating countries

Austria, Germany, Republic of Korea, Switzerland, Turkey, United Kingodm

Partners IEA HEV Task 41 EFV

DLR Deutsches Zentrum für Luft- und Raumfahrt
German Aerospace Center

Coventry University

EFORCE

CNL

Sabancı Üniversitesi

울산대학교 UNIVERSITY OF ULSAN

IEA INTERNATIONAL ENERGY AGENCY
HYBRID & ELECTRIC VEHICLE TECHNOLOGY COLLABORATION PROGRAMME

Technology Collaboration Programme by IEA

IEA INTERNATIONAL ENERGY AGENCY
HYBRID & ELECTRIC VEHICLE TECHNOLOGY COLLABORATION PROGRAMME

HEV-TCP

Task 41

Electric Freight Vehicles

- EFV -

Technology Collaboration Programme
by IEA