HEV TCP Task 27: List of relevant projects

ID	country	name of the project	project profile provided
1	Germany	E-City-Logistics	✓
2	Germany	E-Lieferung-Allgäu	✓
3	Germany	KV-E-CHAIN	✓
4	Germany	Elmo	✓
5	Germany	NaNu!	✓
6	Germany	Urban logistischer Wirtschaftsverkehr	✓
7	Germany	B-AGV	✓
8	Germany	efleet	✓
9	Germany	ElektroAES	✓
10	Germany	ELENA II	✓
11	Germany	SMART-E-USER	✓
12	Germany	komDRIVE	x
13	Germany	EMIL	✓
14	Germany	ENUBA	x
15	Germany	ENUBA II	x
16	Germany	EMKEP	x
17	Germany	DisLog	✓
18	Germany	eCanter for Stuttgart	✓
19	Germany	GeNaLog	x
20	Germany	Elektrische Schwerlastlogistik im urbanen Raum	x
21	Germany	IKONE	x
22	Austria	E-LOG Klagenfurt	x
23	Austria	E-mobility POST	x
24	Austria	EMILIA-Electric Mobility for Innovative Freight Logistics in Austria	x
25	Austria	LEEFF-Low Emission Electric Freight Fleets	x
26	Turkey	Aras Kargo 100% Electric	✓
27	Turkey	E-courier in Istanbul by TNT Express	✓
28	Turkey	Electric delivery in Istanbul by Sürat Kargo	x
29	Turkey	Migros electric grocery delivery	x
30	The Netherlands	Electric garbage trucks by Van Gansewinkel	x
31	The Netherlands	Electric urban delivery by Combipakt	x
32	The Netherlands	Electric urban delivery with Hytrucks	x
33	The Netherlands	Meshed urban distribution by UPS	x
34	The Netherlands	Rotterdam test electric driving	x

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Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: E-City-Logistic

Duration: 01.07.2010 – 01.06.2011

Country:

short description

The project aims to demonstrate the potential of battery electric vehicles for inner city delivery. In total 5 all electric vehicles are used within the fleets of parcel delivery and textile logistics service providers.

stakeholders involved

Policy: ■ local ☐ national

Industry: ☐ OEM ☐ supplier

Research: ■

Fleet operator: ■

City: Berlin

actors involved

be Berlin, MEYER&MEYER WE LIVE LOGISTICS, DHL, Fraunhofer IPK, sge, VMZ, LNC LogisticNetwork Consultants, DLR

focus areas

Vehicle category: ■ N1 ■ N2 ☐ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV
☐ others:_____

Transport task: ■ urban delivery
☐ regional delivery
☐ others:_____
☐ bulk goods
■ goods of high volume
■ others: clothes, parcel

Vehicles: 3 x Iveco Daily Electric 35s,
2 x e-convertion TGL 8.180 (All Green Vehicles B.V.)

Notes:

- Investigation of new concepts for courier, express and parcel delivery
- Investigation of the feasibility and potential for medium duty delivery of clothes

contact

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links

http://www.dlr.de/vf/desktopdefault.aspx/tabid-958/4508_read-28668

results

- **Inner-city parcel delivery (N1):**
  Battery electric vehicles fulfilled the requirements in terms of driving range, user acceptance, usability (vehicle & infrastructure), reliability.

- **Inner-city delivery of clothes (N2):**
  Battery electric vehicles are reliable. Restrictions in terms of driving range still exist as well as technical charging problems occurred. Extended charging duration limits operation. The tested BEV is able to fully replace a conventional diesel driven one without changes to the logistic concept.

source: BMVBS

Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: E-Lieferung-Allgäu (e-delivery at Allgäu region)

Duration: 01.10.2012 – 30.09.2015

Country:

short description

The project aims to prove the qualification of electric vehicles for rural delivery.

stakeholders involved

Policy: ☐ local ☐ national

Industry: ☐ OEM ■ supplier

Research: ■

Fleet operator: ■

actors involved

focus areas

Vehicle category: ■ N1 ■ N2 ☐ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV

☐ others:_____

Transport task: ☐ urban delivery

■ regional delivery

☐ others:_____

☐ bulk goods

☐ goods of high volume

☐ others:_____

Vehicles: 22 x ABT eCaddy Maxi,
7 x ABT eT5,
10 x ABT eBox

Notes:

- Small production series of battery electric delivery vehicles
- Vehicle field tests
- User acceptance analysis

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links

http://schaufenster-elektromobilitaet.org/de/content/projekte_im_ueberblick/projektsteckbriefe/projekt_2946.html

source: www.elektromobilitaet-verbindet.de

results

- Electric delivery vehicles are still in a early development stage
- There are not enough electric vehicles available on the market
- Energy consumption varies significantly and is up to twice as high, depending on driving style and season
- Long down times due to the lack of after sales experiences
- Due to driving range, reliability and flexibility restrictions during winter times, electric vehicles are not cost-effective yet
- Electric vehicles are particularly suited for periodic or up front scheduled routes
- New technology is well accepted by the users
- Emotional attraction of electric mobility is essential in order to support market ramp-up
- Potential users has to be involved in the development and implementation process in order to increase technology acceptance

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Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: KV-E-CHAIN (holistic concept for intermodal transport with electric vehicles)

Duration: 01.08.2013 – 30.06.2016

Country:

short description

The project aims the demonstration of a fully electrified supply chain regarding long-distance haulage. In addition, full electric intermodal transport will be demonstrated.

stakeholders involved

Policy: ■ local ☐ national

Industry: ■ OEM ☐ supplier

Research: ■

Fleet operator: ■

actors involved

DHL, BEHALA, TERBERG, Technische Hochschule Wildau, Berlin

focus areas

Vehicle category: ☐ N1 ☐ N2 ■ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV ☐ others:_____

Transport task:
- ■ urban delivery
- ☐ regional delivery
- ■ others: port terminal
- ☐ bulk goods
- ☐ goods of high volume
- ☐ others:_____

Vehicles: 1 x Terberg YT electric

Notes:
- Implementation and integration of a full electric heavy duty vehicle within an existing vehicle fleet
- New business models for city logistic application of electric vehicles
- Testing charging station using solar power

contact

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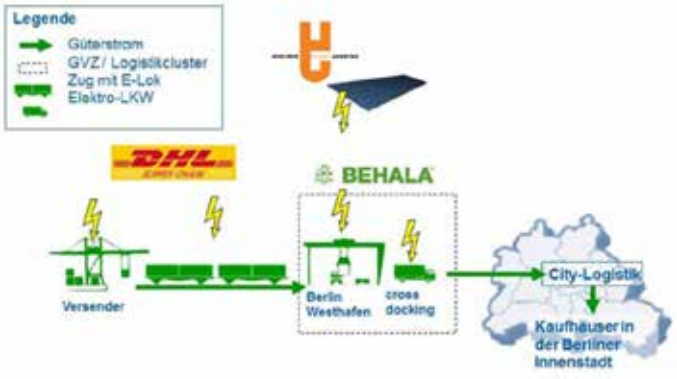
links

http://www.emo-berlin.de/schaufenster/projekte/gueterverkehr/kv-e-chain/

results

- feasibility of heavy (40t+ GVW) battery electric vehicles was successfully proven
- compared to a conventional diesel driven tractor:
  - specific energy consumption is about 30% to 40% lower
  - three times higher purchasing costs
  - reduction of energy costs by 40%
  - reduction of maintenance costs by 25%
- effective operational range of about 50 to 60km is sufficient for urban transport operations

source: TH Wildau



source: www.kvechain.de

Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: Elmo (electric urban logistics)

Duration: 01.09.2011 – 30.06.2015

Country:

short description

The projects aims to proof practical feasibility of electric vehicles for urban delivery.

stakeholders involved

Policy: ■ local ☐ national

Industry: ☐ OEM ■ supplier

Research: ■

Fleet operator: ■

actors involved

BUSCH-JAEGER Die Zukunft ist da. | cws boco | UPS | TCD | Stadt Dortmund Wirtschaftsförderung | Fraunhofer IML

focus areas

Vehicle category: ■ N1 ■ N2 ☐ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV
☐ others:_____

Transport task: ■ urban delivery
☐ regional delivery
☐ others: _____
☐ bulk goods
☐ goods of high volume
☐ others:_____

Vehicles: 6 x P80-E, 2 x Smith Newton, 1 x C-Zero, 1 x TGL 12.250

Notes:

- Investigation of the usability of electric vehicles for urban delivery

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links

http://www.iml.fraunhofer.de/de/themengebiete/verkehrslogistik/themen_transportverkehrlogistik/Elmo.html

source: CWS-boco

results

- supply of battery electric vehicles is very rare, especially for medium and heavy duty vehicles.
- available vehicles does not meet customer requirements
- a lack of comprehensive service infrastructure for battery electric vehicles exist and leads to longer downtimes compared to ICE vehicles
- lack of experience along with technical issues generate “organizational range anxiety“: overcautious route planning and dispatching
- significant differences between real driving distances and manufacturer information (energy consumption measured was considerably above the manufacturer information)
- general reliability highly volatile, yet single vehicles reach well over 90%
- technical difficulties with the drive train itself cause about half the outages
- technical problems with charging have not been recorded

source: Busch-Jaeger

source: Fraunhofer IML

source: UPS

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Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: NaNu! (multi-shift operation and night delivery)

Duration: 01.01.2013 – 30.06.2016

Country:

short description

The project proves electric medium duty delivery for multi-shift operation using battery swapping.

stakeholders involved

Policy: ☐ local ☐ national

Industry: ■ OEM ☐ supplier

Research: ■

Fleet operator: ■

actors involved

LNC, Castellan AG, MEYER&MEYER, HÜFFERMANN, Fraunhofer IPK, DAI-Labor, DLR

focus areas

Vehicle category: ☐ N1 ■ N2 ☐ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV ☐ others:_____

Transport task: ■ urban delivery ☐ regional delivery ☐ others:_____ ☐ bulk goods ☐ goods of high volume ☐ others:_____

Vehicles: 1 x 12t GVW E-Truck,
1 x 7,5t GVW E-Truck

Notes:

- Organisation of 24 hour delivery from a logistic, customer and regulatory perspective
- Implementation of a battery swapping system for commercial vehicle application
- Analysis of the cost reduction potential of electric commercial vehicles in multi-shift operation

contact

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links

http://schaufenster-elektromobilitaet.org/de/content/projekte_im_ueberblick/projektsteckbriefe/projekt_2305.html

source: BMVBS

results

potentials identified :

- potential early adopters of BEV are distribution companies stick to a sustainability strategy (user survey result)
- potential sectors based on user survey for BEV fleet implementation are: pharmaceutical wholesaler, online sales, electrical goods trades, (bio-) food industry (user survey result)
- delivery shift potential into night times are expected to be limited (maximum of 10%) (user survey result)
- economical application for e-truck (12t GVW) is possible at yearly mileage of >65.000 km (strongly depended on investment costs, yearly mileage and energy prices)
- approx. 14% cost reduction potential for three-shift operation instead of two-shift

hurdles identified (user survey result):

- limited scheduling of battery electric trucks due to none existing series technology and lack of after sales experiences
- payload restrictions
- delivery at nighttime: lack of access and attendance of staff handling the delivery
- battery swapping systems: security and handling concerns

recommendations for action (user survey result):

- support of electromobility should be more user-specific
- potential regulatory measures are: import restrictions in cities for conventional driven vehicles, city toll
- bonus regime for battery electric vehicles

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Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: Urban logistischer Wirtschaftsverkehr (urban logistics)

Duration: 01.11.2012 – 30.09.2015

Country:

short description

The project investigates the deployment of electromobility in the context of inner city delivery logistics.

stakeholders involved

Policy: ■ local ☐ national

Industry: ■ OEM ☐ supplier

Research: ■

Fleet operator: ■

actors involved

UPS, Deutsche Post DHL, DPD, Fraunhofer IAO, Stuttgart, Karlsruhe, Ludwigsburg, Daimler

focus areas

Vehicle category: ■ N1 ■ N2 ☐ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV
☐ others:_____

Transport task: ■ urban delivery
☐ regional delivery
☐ others:_____
☐ bulk goods
☐ goods of high volume
☐ others:_____

Vehicles: P80-E (EFA-S)
Vito E-Cell

Notes:

- Conception and implementation of business cases for electric transporter in terms of different vehicle concepts
- Investigation and construction of flexible charging infrastructure for vehicle operation in changing depots
- Analysis and evaluation of best practice incentive measures
- Determination of future vehicle requirements for inner city deliver (vehicle concept, driving range, payload, etc.)

contact

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links

http://schaufenster-elektromobilitaet.org/de/content/projekte_im_ueberblick/projektsteckbriefe/projekt_4036.html

results

- in case of quantity discounts for conventional diesel driven vehicles are not considered, N1 class battery electric transporter are profitable
- battery electric transporter are an adequate alternative compared to conventional diesel driven ones
- reliability and service intervals are comparable to conventional transporter
- charging infrastructure is partly not reliable with only poor service available
- if battery electric fleet growth, required power supply and possible mains fluctuations has to be taken into account (regarding the charging infrastructure)
- incentives forced by regulatory framework e.g. driving license regulation improves the economical operation of battery electric transporter (especially when considering costs and composition the whole vehicle fleet)

source: www.schaufenster-elektromobilitaet.org

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Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: B-AGV (battery electric automated guided vehicles)

Duration: 01.06.2010 – 30.09.2011

Country:

short description

The project aims to reduce automated guided vehicle (AGV) related tank to wheel emissions and noise at port terminal.

stakeholders involved

Policy: ☐ local ☐ national

Industry: ■ OEM ☐ supplier

Research: ■

Fleet operator: ■

actors involved

HHLA

ika RWTH AACHEN UNIVERSITY

GOTTWALD port technology

ifeu INSTITUT FÜR ENERGIE- UND UMWELTFORSCHUNG HEIDELBERG

focus areas

Vehicle category: ☐ N1 ☐ N2 ■ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV ☐ others:_____

Transport task:
- ☐ urban delivery
- ☐ regional delivery
- ■ others: port terminal
- ☐ bulk goods
- ☐ goods of high volume
- ☐ others:

Vehicles: 2 x automated guided vehicles

Notes:

- Development of a all electric powered AGV in combination with battery swapping station
- Investigation of flexible charging strategies by using renewable energy
- Ecological assessment (energy footprint)
- Investigation of all electric vehicle deployment practicability

contact

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links

http://erneuerbar-mobil.de/projekte/b-agv

source: www.erneuerbar-mobil.de

results

- successful development and bringing into service of battery electric AGVs
- additional integration of SuperCaps in order to preserve the battery system is not economic viable
- successful development and bringing into service of a fully automated battery swapping station
- operating experience per AGV of around 1,000 hours
- depending on energy prices, energy cost savings of about 50% are achieveable
- climatic effects of the conventional diesel electric AGVs compared to battery electric AGVs per container handling depending substantially from the energy mix considered and has the potential to reduce it up to 85%
- cumulated energy demand per container handling can be reduced by 25%

source: www.erneuerbar-mobil.de

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Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: efleet (electromobility at Stuttgart airport)

Duration: 01.03.2013 – 29.02.2016

Country:

short description

The project tests the deployment of electric driven vehicles at air terminals.

stakeholders involved

Policy: ☐ local ☐ national

Industry: ■ OEM ☐ supplier

Research: ■

Fleet operator: ■

actors involved

Flughafen Stuttgart, COBUS INDUSTRIES, SCHOPF, VOLK, DLR, MULAG

focus areas

Vehicle category: ■ N1 ■ N2 ■ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV ☐ others:_____

Transport task:
- ☐ urban delivery
- ☐ regional delivery
- ■ others: air terminal
- ☐ bulk goods
- ☐ goods of high volume
- ☐ others:_____

Vehicles: 1 x Schopf F110 electric, 1 x Volk EFZ 30 NT, 1 x Volk EFZ 80 N, 1 x Mulag Comet 3E, 1xMulag Orbiter 9E, 1 x Cobus Industries e.cobus 3000

Notes:

- Determination of individual vehicle category requirements at air terminals
- Definition of ideal spots for charging
- Benchmark of life cycle costs: electric vs. conventional
- To prepare a set of criteria in terms of the implementation of electric vehicles at air terminals

contact

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links

http://schaufenster-elektromobilitaet.org/de/content/projekte_im_ueberblick/projektsteckbriefe/projekt_704.html
https://vimeo.com/62242706

source: www.livinglab-bwe.de

source: www.livinglab-bwe.de

results

- App. 100.000 km distance covered on batteries
- Up to 65 % energy saving per job possible compared to diesel reference
- Batteries perform nearly in all areas as good or better than conventional diesel technology trucks especially the battery electric busses and battery electric tow trucks
- Up to 18 % brake energy recovery possibly for luggage tractors
- All electric vehicles operate reliably
- New technology is well accepted by the drivers
- 95% availability of the eBuses has been achieved
- The 1:1 fleet replacement regarding the Buses can be done without risk
- The transition from diesel to electric buses can be realized without additional costs by using subsidies/grants
- Stuttgart Airport plans to electrify complete luggage and passenger transport fleet until 2017
- Transferability of results to other airports is given

Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: ElektroAES (operation of garbage collection trucks)

Duration: 01.01.2013 – 31.06.2016

Country:

short description

Development of a hybrid electric waste collection vehicle with electric collection body and intelligent charging stations.

stakeholders involved

Policy: ☐ local ☐ national

Industry: ■ OEM ☐ supplier

Research: ■

Fleet operator: ■

actors involved

Fraunhofer IPK, NTM, BSR, HÜFFERMANN Transportsysteme GmbH, Volvo Trucks Hybrid, STEP, AWU Abfallwirtschafts-Union Oberhavel GmbH

focus areas

Vehicle category: ☐ N1 ☐ N2 ■ N3

Powertrain type: ■ HEV ☐ BEV ☐ FCEV ☐ others:_____

Transport task:
- ☐ urban delivery
- ☐ regional delivery
- ■ others: waste collection
- ☐ bulk goods
- ☐ goods of high volume
- ☐ others:_____

Vehicles: 3 x Volvo FES 6x2 Hybrid

Notes:
- Determination of technical vehicle parameter
- Analysis of the vehicle techno-economics
- Installation and operation of charging stations
- Optimization of electric waste collection

contact

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links

http://schaufenster-elektromobilitaet.org/de/content/projekte_im_ueberblick/projektsteckbriefe/projekt_1600.html

source: www.emo-berlin.de

source: www.emo-berlin.de

results

- Unfortunately, results are not available.

Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: ELENA II (Plug-In Hybrid electric vehicle)

Duration: 31.08.2013 – 01.03.2015

Country:

short description

The projects aims to commercialize a electric powertrain kit for e-convertion.

stakeholders involved

Policy: ☐ local ☐ national

Industry: ☐ OEM ■ supplier

Research: ■

Fleet operator: ☐

actors involved

huberGroup, Fraunhofer IPA, Lauer & Weiss, ARADEX, Hochschule Esslingen, FKFS, WSE, Landesnetzwerk Mechatronik BW, inem

focus areas

Vehicle category: ■ N1 ☐ N2 ☐ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV
☐ others:_____

Transport task: ☐ urban delivery
■ regional delivery
☐ others:_____
☐ bulk goods
☐ goods of high volume
☐ others:_____

Vehicles: Mercedes-Benz Sprinter

Notes:

- Commercialization of a Mercedes-Benz Sprinter electric powertrain kit for e-convertion

contact

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results

- Unfortunately, results are not available.

source: www.elena-phev.com

source: www.elena-phev.com

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Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: SMART-E-USER (concepts for electric urban logistics)

Duration: 01.06.2013 – 31.05.2016

Country:

short description

The Smart e-User concept focuses on the interface of commercially used electric vehicles, logistic processes, a dynamic routing planning, energy-management and economically sustainable approaches to identify new ways of urban distribution (passenger and freight).

stakeholders involved

Policy: ☐ local ☐ national

Industry: ☐ OEM ☐ supplier

Research: ■

Fleet operator: ■

actors involved

focus areas

Vehicle category: ■ N1 ☐ N2 ☐ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV ☐ others:_____

Transport task: ■ urban delivery ☐ regional delivery ☐ others: _____ ☐ bulk goods ☐ goods of high volume ☐ others:_____

Vehicles: 3 x Iveco Daily, 6 x Renault Kangoo Z.E., 4 x Streetscooter Serie 100, 2 x Strettscooter Serie 50, 5 x MB Vito E-Cell, 2 x Smart electric drive, 1 x Citroen C-Zero

Notes:

- Demonstration of economic feasible applications for inner city delivery
- Identification of electric vehicle user categories and derivation of specific operation profiles
- Investigation of the usability of a city-hub
- Investigation of the potential as to energy, logistic and economic perspective

contact

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links

http://www.logistik.tu-berlin.de/menue/forschung/abgeschlossene_forschungsprojekte/smart_e_user/

results

- Profiles for potential user-groups of e-vehicles for urban logistics could be identified.
- These groups show, for Berlin, where the sample of the research was taken, a link to typical activities carried out by the user groups during their tours.
- A comparison with KiD 2010 data confirmed these links.
- Furthermore, the study revealed that it is possible to divide between hygiene factors and motivators for users of electric vehicles for commercial transport:
  hygiene factors: availability of suitable vehicles with needed loading capacity; TCO for e-vehicle must not be higher than TCO for combustion engine vehicle; ease-of-use of vehicle and charging process; reliability of charging process; comfort of working place „vehicle“ must not be lower than at combustion engine vehicle; range of vehicle must be reliable, sufficient and transparent;
  motivators: Well-to-Wheel emissions are lower than for combustion engine vehicle; understanding and knowledge of ideal use of acceleration and recuperation; automated gear; low emissions (noise and fumes); environmentally friendly image of vehicle.
- In addition a driving and loading assistance system was successfully tested within the project and considered an important support for users of the e-vehicles.

Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: EMIL (Testing of commercial vehicle electromobility solutions)

Duration: 01.06.2010 – 30.09.2011

Country:

short description

The project aims to investigate and test a all electric innovative commercial vehicle solution allow for city logistic applications cost effective in comparison to a conventional driven one.

stakeholders involved

Policy: ☐ local ☐ national

Industry: ■ OEM ☐ supplier

Research: ■

Fleet operator: ■

actors involved

Deutsche Post DHL

Hochschule für Bildende Künste Braunschweig

focus areas

Vehicle category: ■ N1 ☐ N2 ☐ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV
☐ others:_____

Transport task: ■ urban delivery
☐ regional delivery
☐ others: _____
☐ bulk goods
☐ goods of high volume
☐ others:_____

Vehicles: 13 VW Caddy, 1 EMIL (new vehicle concept)

Notes:

- e-convertion of VW Caddy and field test of DHL
- Conception and development of a innovation vehicle (purpose design)

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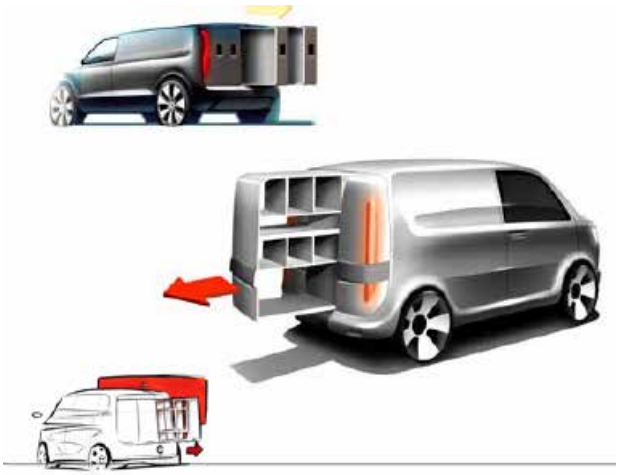
links

http://erneuerbar-mobil.de/projekte/emil

results

- Inner-city delivery and customer service (N1): Battery electric vehicle totally fulfill the requirements investigated (e.g. driving range, user acceptance, etc.).
- Rising overhead in terms of vehicle routing management occurs due to driving range limitations and extended charging durations. Ecologic benefit is the most important unique selling point.
- Significant potential of battery electric vehicles for inner-city operation was approved.



Source: Altenkirch et al. 2011, Konzipierung und Gestaltung elektromobiler Dienstleistungen im innerstädtischen Raum (report)

Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: DisLog (Resource efficient urban distribution logistics)

Duration: 01.05.2013 – 30.06.2016

Country:

short description

The project aims to develop a new logistic concept for inner city courier, express and parcel service delivery.

stakeholders involved

Policy: ☐ local ☐ national

Industry: ■ OEM ☐ supplier

Research: ■

Fleet operator: ■

actors involved

Hermes, WILDAU, empro, LNC, DAIMLER, DLR, ETM, messenger, obeta electro, www

focus areas

Vehicle category: ■ N1 ☐ N2 ☐ N3

Powertrain type: ■ HEV ■ BEV ☐ FCEV ☐ others:_____

Transport task: ■ urban delivery ☐ regional delivery ☐ others:_____ ☐ bulk goods ☐ goods of high volume ■ others: parcel

Vehicles: not available

Notes:

- Deployment of battery electric and hybrid electric commercial vehicles
- Benchmark of available battery electric and hybrid electric commercial vehicles
- Definition of a requirements toward an inner city delivery vehicle concept (lightweight, powertrain, container system, etc.)
- Requirements towad optimization of inner-city delivery processes using electric vehicles

contact

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links

http://www.emo-berlin.de/schaufenster/projekte/gueterverkehr/dislog/

results

- The choice of vehicles suitable for commercial transport is still very limited. Even more, these should be available at prices comparable to vehicles with combustion engines.
- As a consequence, a shift to e-vehicles for urban logistics is often not financially viable.
- Even more, as in some cases, due to the inadequacy of the transport capacity of the available e-vehicles, organizations had to keep additional vans for being able to transport also bigger goods ad hoc over the required distances. The combination of higher prices for e-vehicles plus the resulting need for additional vehicles inhibits a swift shift to e-mobility for urban transport.
- Request from drivers and decision makers: e-vehicles should be truly innovative, in function and design.

source: http://www.emo-berlin.de/schaufenster/projekte/gueterverkehr/dislog/

IEA INTERNATIONAL ENERGY AGENCY
HYBRID & ELECTRIC VEHICLE IMPLEMENTING AGREEMENT

IA-HEV

Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: eCanter for Stuttgart

Duration: 11.04.2016 – 11.04.2017

Country:

short description

Fleet testing of battery electric trucks in different applications.

stakeholders involved

Policy: ☐ local ☐ national

Industry: ■ OEM ☐ supplier

Research: ☐

Fleet operator: ■

actors involved

DAIMLER Hermes

STUTTGART AWS

focus areas

Vehicle category: ☐ N1 ■ N2 ☐ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV ☐ others:_____

Transport task:
- ■ urban delivery
- ☐ regional delivery
- ☐ others:_____
- ☐ bulk goods
- ☐ goods of high volume
- ■ others: bio waste, gravel, furniture, parcel

Vehicles: 5 x eCanter 7,5t GVW

Notes:

- To proof suitability of daily use (e.g. driving range, operating cost)

contact

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links

http://www.automobil-industrie.vogel.de/stuttgart-testet-elektro-lkw-a-529783/index2.html

source: Fuso Europe

source: Fuso Europe

source: Fuso Europe

results

Feedback City of Stuttgart (impressions after 7,500 km)

- Reach of one battery charge (50-90 km/day) is perfect for one day of usage. Charging over night is sufficient.
- The payload of all vehicles is enough. Except the tipper body for road construction could have a little bit more payload when loading sand.
- Low loading sill is good for easy load and unloading.
- The VSP-Warning systems makes a noise which warns pedestrians, but it is till possible to switch it off when the vehicles are used at night.

Feedback Hermes (impressions after 2,500 km)

- Driving without a sound is positively honored by the drivers
- The handling of the vehicle is easy - no need for re-orientation
- The recuperation brake is ranked advantageously and preferred in operation
- Small turning circle enables comfortable driving – especially in the city
- More flexibility desired, up to 150 km/day ideal
- Area-wide coverage of charging infrastructure is needed
- Larger portfolio needed to fit different uses
- Vehicles at economical costs

Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: Aras Kargo-Turkey

Duration: 01.11.2013 – 31.12.2014

Country:

short description

The aim of the project is to implement a new environment friendly logistic concept for inner city express and parcel service delivery. The company currently operates 39 BEVs.

stakeholders involved

City: ☐

Policy: ■ local ☐ national

Industry: ☐ OEM ■ supplier

Research: ☐

Fleet operator: ■

actors involved

focus areas

Vehicle category: ■ N1 ☐ N2 ☐ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV
☐ others:_____

Transport task: ■ urban delivery
☐ regional delivery
☐ others:_____
☐ bulk goods
☐ goods of high volume
☐ others:_____

Vehicles: Renault eTrafic (BDOTO)
Renault eKangoo (BDOTO)
Fiat eDucato (BDOTO)

Notes:

- Analysis of the cost reduction potential of electric commercial vehicles
- Analysis of carbon footprint deduction of electric commercial vehicles.

contact

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links

http://www.araskargo.com.tr/tr/entitialfocus.aspx?primary_id=8465&type=1492&target=categorial1&detail=single&sp_table=&sp_primary=&sp_table_extra=&openfrom=sortial

results

Inner-city parcel delivery (N1):
Aras Kargo initiated the project with 9 BEVs. After the successful implementation, the company increased their electric vehicle fleet size to 39 BEVs in June 2014.

Taskforce 27 "Electrification of transport logistic vehicles"

demonstration project profiles form partner countries

Name of project: TNT Express-Turkey

Duration: 26.08.2010 – 24.08.2011

Country:

short description

The aim is to be a pioneer in utilizing the electric vehicles in the sector. In total 10 battery electric vehicles are used for courier and parcel delivery.

stakeholders involved

City: ☐

Policy: ■ local ☐ national

Industry: ☐ OEM ■ supplier

Research: ☐

Fleet operator: ■

actors involved

TNT express

bd

focus areas

Vehicle category: ■ N1 ☐ N2 ☐ N3

Powertrain type: ☐ HEV ■ BEV ☐ FCEV
☐ others:_____

Transport task: ■ urban delivery
☐ regional delivery
☐ others:_____
☐ bulk goods
☐ goods of high volume
☐ others:_____

Vehicles: 1 Renault eTrafic (BDOTO)
9 Renault eKangoo (BDOTO)

Notes:

- The company's environmentally friendly policies implemented on the global scene
- The potential to reduce the operational costs.

contact

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links

http://www.tnt.com/express/tr_tr/data/news/2013/tnt-filosu-genisliyor.html

results

Inner-city parcel delivery (N1):
BEVs fulfill therequirements for courier service within city limits; however; they are not suitable for intercity/rural delivery because of the lack of charging stations, long recharge duration, short driving range.

Range (km) / Max Speed (km/h)
eKangoo: 100 / 100
eTrafic: 160 / 90

Average distance traveled (km/day)
eKangoo: 35
eTrafic: 22