PROJECT

ICT4FEV

Information and Communication Technologies for the Full Electric Vehicle

Funding: European (7th RTD Framework Programme)

Duration: May 2010 - Sep 2012

Status: Complete with results

Total project cost: €1,286,509

EU contribution: €999,474

Call for proposal: FP7-2010-ICT-GC

CORDIS RCN : 94688

Background & policy context:

The proposed coordination action addresses enabling technologies of full electric vehicles (FEV). The focus of the initiative is set on ICT which open new technology paths towards energy efficiency, functionality and usability and are complementary to future advances in performance of battery cell technology. To fight climate change, cut emissions and secure energy supply, transport based on FEVs will soon be strongly demanded by public and private stakeholders worldwide. It can be foreseen that early technology leadership will be determinant for the global competitiveness of major European industries such as the automotive, energy and ICT sector.

Objectives:

ICT4FEV aimed at building a R&D community, creating a European roadmap and recommending standards, regulations, business cases and R&D priorities for the FEV. In its core consortium it therefore worked to bring together for the first time major industrial partners to start a dialogue on a common understanding about impact, R&D priorities, infrastructure needs and requirements. Opportunities of technology transfer, e.g. between electric road vehicles and aircraft, were taken into account and foresighted recommendations were to be made.

The outcome of ICT4FEV was to serve as guideline for setting strategic priorities on a European level and by presenting the European FEV strategy. At international events its objective was to help demonstrate the innovation strength of Europe in the field of FEV. At the same time, ICT4FEV served as a platform for public information and network building in Europe.

Methodology:

The consortium was lead by VDI/VDE-IT and includes as members CRF (I), Siemens (D), NXP (NL), and EADS (F), as well as AVL List (A). Further organisations have been invited to contribute to the project as associate partners.

ICT4FEV started on 1 May 2010 as the first project of the European Green Cars Initiative. It was funded by the European Commission's Directorate General Information Society and Media and has a duration of 24 months.

Parent Programmes:

FP7-ICT - Information and Communication Technologies

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Vdi/vde Innovation + Technik Gmbh

Address:
Steinplatz 1
10623 Berlin
Germany

EU Contribution: €606,112

Partner Organisations:

Interactive Fully Electrical Vehicles Srl

Address:
Via Carle
12048 Sommariva Del Bosco Cn
Italy

Organisation Website:
http://www.ifevs.com

EU Contribution: €32,100

Centro Ricerche Fiat - Societa Consortile Per Azioni

Address:
Strada Torino, 50
10043 ORBASSANO (TO)
Italy

Organisation Website:
http://www.crf.it

EU Contribution: €75,435

Airbus

Address:
2 ROND POINT EMILE DEWOITINE
31700 BLAGNAC
France

Organisation Website:
http://www.airbus.com

EU Contribution: €67,056

Nxp Semiconductors Netherlands Bv

Address:
High Tech Campus
5656 Eindhoven
Netherlands

Organisation Website:
http://www.nxp.com

EU Contribution: €83,593

Avl List Gmbh

Address:
Hans-List-Platz

8020 Graz
Austria

Organisation Website:
http://www.avl.com

EU Contribution: €73,653

Siemens Ag

Address:
Wittelsbacherplatz 2
80333 MUENCHEN
Germany

Organisation Website:
http://www.siemens.com

EU Contribution: €61,525

Technologies:

Unclassified
Non-technology

Key Results:

Principal findings

- The decreasing EU sales of ICE cars of the last four years is very likely to continue and never return to the 2007 level,
- High customer acceptance of the EVs in commerce; customers get used with their EVs in few weeks and range anxiety disappears,
- Not only large cars, the demand is changing asking for a quick adaptation of the mobility offer, in Europe the request of EVs will largely exceed the offer for several years,
- Technology is evolving fast and by 2015 most new cars weighting below 1000kg is expected to be designed starting from their fully electrical option,
- The penetration of e-means is proceeding faster than forecast in the first EU electrification roadmap. 2012 will be the first year of appreciable sales (35,000-40,000) in Europe but the general lack of road experimentation will set the first large sales at 2015 with 450,000 FEVs (3.5%) out of the 12-13 million total passenger car EU registration.
- The current focus given to mid-size full hybrids cars (1300-1500kg), is hiding the real market potentiality of FEVs weighting below 1000kg. Since 2013, with the introduction of cars like, Daimler smart for two, Renault ZOE, Volkswagen e-UP, Toyota Scion IQ EV, and several other models of the same class, the approach to the design of EVs will experience a radical change,
- By 2020, up to 40% of the vehicles weighting less than 1000kg will very likely be sold fully electric. Up to 50% of km of private road mobility of people is likely to be run by e-means (in China in 2010 that ratio was already at 50%),
- A figure of merit based on congested links, incentives, people’s savings and dimension of the country indicate UK, and Italy to be potentially the first two largest EU markets of EVs,
- The simplicity of the EV architecture facilitates the appearance of new entries for which light and heavy Renault Twizy like vehicles will represent a new reference for personal mobility in large urban areas,
- Until the demand is far superior to the offer the strongest Nations invest on industrial development, the weakest ones on incentives.

Strategy targets

An efficient and integrated mobility system

- A Single European Transport Area
- Service quality and reliability

Documents:
D 2.4 Report National R and D Programs (Other project deliverable)

STRIA Roadmaps: Transport electrification

Transport mode: Multimodal transport

Transport sectors: Passenger transport

Transport policies: Decarbonisation, Environmental/Emissions aspects, Digitalisation

Geo-spatial type: Other