

PROJECT

E-DASH

Electricity Demand and Supply Harmonizing for EVs.

Funding: European (7th RTD Framework Programme)

Duration: Sep 2011 - Nov 2014

Status: Complete

Total project cost: €8,533,674

EU contribution: €5,300,000



Call for proposal: FP7-2011-ICT-GC

[CORDIS RCN : 99998](#)

Background & policy context:

The sustainable integration of the electric vehicles requires an intelligent charging system for the real-time exchange of charge related data between FEVs and the grid in order to allow the management of:

- High-current fast-charging for large numbers of FEVs in a brand-independent way
- Price-adaptive charging/reverse-charging at optimum price for the customer
- The real-time grid balancing according to spatial and temporal needs and capacities, influenced by the demand
- (FEVs) and the supply side (unpredictability of regenerative energies)
- Competent remote load charging process control in order to prevent damages of FEV batteries.

It is the objective of e-DASH to develop those IC Technologies and processes that are needed to achieve the real-time integration of "FEVs" in the European Electricity Grid to enable an optimum electricity price to the customer and at the same time allows an effective load balancing in the grid.

Great emphasis is placed on the "openness of the V2OEM Interface" granting access to multiple players maintaining the customers' choice.

e-DASH will become crucial to future electric road transport by providing the necessary intelligent charging system, which is able to balance locally and temporarily in almost real-time the electricity demand of large numbers of FEVs (fast charging) and unstable regenerative energy supply.

Objectives:

"e-DASH" aims at the harmonization of electricity demand in Smart Grids for sustainable integration of electric vehicles. This is addressed by an intelligent charging system supported with near real-time exchange of charge related data between EVs and the grid.

The sustainable integration of electric vehicles requires near real-time exchange of charge related data between EVs and the grid in order to allow the management of:

- high-current fast-charging for large numbers of EVs in a brand independent way
- price-adaptive charging/reverse-charging at optimum price for the customer to increase the desirability of EVs
- the near real-time grid balancing according to spatial and temporal needs and capacities, be it influenced by the demand or the supply side (unpredictability of regenerative energy sources and simultaneous EV charging processes)
- competent remote load charging process control in order to prevent damages of EV batteries.

Methodology:

Adopting the e-DASH approach allows high-current fast-charging for a large numbers of EVs in a brand-independent way, and price-adaptive charging/reverse-charging at optimum prices for the customer leading to increased demand of EVs. In order to prevent damages of costly EV batteries, sophisticated charge controls are inevitable. Moreover e-DASH also focuses on near real-time grid balancing for highly variable demand/supply situations according to spatially and temporally changing energy requirements

(e.g. temporally connected EVs and regenerative energy sources).

Parent Programmes:

[FP7-ICT - Information and Communication Technologies](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Volkswagen

Address:

Berliner Ring 2
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Organisation Website:

<http://www.volkswagen.de>

EU Contribution: €0

Partner Organisations:

Commissariat A L Energie Atomique Et Aux Energies Alternatives

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Organisation Website:

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EU Contribution: €0

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EU Contribution: €0

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EU Contribution: €0

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EU Contribution: €0

Ercp European Research Programme Consulting Gmbh**Address:**

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EU Contribution: €0

Technologies:

Electric road vehicles
Public charging infrastructure

Development phase: Research/Invention

Transport

STRIA Roadmaps: electrification

Transport mode: Road transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Digitalisation

Geo-spatial type: Other