Integrating Electric Vehicles in a Demand Side Management Strategy to increase RES

K.H.Kempen (KCE)
Belgium research organisation

Project Details

Project coordinator	Geert Van Ham
Other applicants	
Sector	Research organisation
Call of Interest	X CORNET ☐ EraSME
Proposal summary:	Use Electric vehicles (EV) with demand side management (DSM) to implement more renewable resources (RES), limiting the effects of intermittency of the RES.
Advantages for SMEs, trade or industry:	- Possibility to implement more RES within a limited distribution grid. - Optimize energy bill with DSM - Facilitating electric vehicles
Profile of partners sought:	Research organisations, RES companies and organisations, electric vehicle suppliers,

- EV have a large battery for energy storage. Using this energy storage in a demand side management strategy makes it possible:
  - To control loading of the batteries so that it minimises costs for the consumer and so that the grid limits are respected
  - To use the available buffer capacity for balancing RES
  - To develop ancillary services for the grid
- Major objectives:
  - Increasing the economic value of RES
  - Making increased RES production possible without losing grid stability
  - Making the business case of smart meters positive (for the consumer)
  - Minimising the extra storage capacity needed to buffer fluctuating RES

- Benefits for participating SMEs:
  - Facilitating the penetration of EV
  - Extra profit by using EV in a DSM strategy (optimising the energy bill)
  - Making increased RES production possible
  - Lower CAPEX and lower OPEX
- Estimated costs and duration of the project
  - 2 year project
  - Budget approximately €400 000

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