

Abstract

c) Synopsis

New concepts for user interfaces (visualisation and graphical user interface) for e-mobility costumers within the Smart Grids model region of Salzburg are developed; parameters and cost/benefits of a future Vehicle to Grid implementation will be evaluated by this feasibility study. Based on this, an implementation plan for suitable software developments (experimental development) as well as a demonstration phase are derived.

d) Abstract

The upcoming structural change of the Austrian energy system caused by increased electric mobility market penetration will increase challenges for future electricity system operation significantly. Furthermore, necessary efficiency increases in the energy system seem to be easier to implement, if e-mobility customers are involved in daily grid operation. Thus, the available grid infrastructure should be used by a rising number of electric vehicles in the best way possible. Nevertheless, this strategy requires the detailed capture of enterprise-internal processes as well as the definition of future business models which guarantee for both, the customer and the system operator, the greatest possible comfort. Therefore, the customer integration in Vehicle to Grid concepts demands technically and economically feasible solutions which have the chance to be tested in adequate demonstration sites.

Thus, the main questions of this feasibility study are:

- Which technical parameters are evident for a large scale system integration of Vehicle to Grids concepts in Salzburg in order to provide comfortable and economically feasible visualisation applications for e-mobility costumers?
- How is it possible to design tailor made Vehicle to Grid based visualisation possibilities for "Salzburg", in order to reach optimised cost/benefit ratios?

Consequently, this feasibility study evaluates necessary technical parameters (for hard- and software applications) which enable the implementation of Vehicle to Grid driven visualisation processes within the Salzburg AG to create e.g. new billing services (such as "Roaming" in electricity grids for e-mobility costumers) or other business processes. These visualisation concepts will be derived for costumers' daily needs incorporating adequate software layouts for perfect handling. Even more, detailed cost/benefit analyses will be derived in order to evaluate future market potentials of each solution.

The key results of this project are:

- A technical parameter list for hard- and software solutions suitable for the company Salzburg AG
- Business models and corresponding visualisation concepts for Vehicle to Grid application within the "Salzburg Model Region"
- List of requirements for platform independent visualisation applications
- An implementation plan (business plan) for feasible solutions

Above all, derived concepts will be offered to costumers of the "Salzburger ElectroDrive Initiative" in a latter development and demonstration phase enabling high comfort gains for already existing costumers.