

2nd Vehicle 2 Grid Conference

Electric vehicles for the renewable city



Project/initiative name

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Introduction

Senfal develops software that is the missing link to enable the energy transition. Our software will coordinate and control large amounts of distributed energy resources. We built this software to secure the delivery of electrical energy at the least cost, for our clients. We connect the asset to various energy markets (FCR, APX & imbalance). For this we built intelligent, self-learning software that predicts, forecasts and controls (among others) chargepoints of electric vehicles.

Aim

A scalable business model for mobility service providers that utilises the flexibility within charging schedules. The solution will enable various types of propositions based on controlling charging schedules of EVs.

Expected deliverables

- Predictive algorithms for: state of charge, duration of charging session, amount of flex.
- Control algorithms for: altering charging session
- Market optimization algorithms for: dispatch of flexible load at pool level (bundles of charging stations) for various markets (TenneT/APX/ENDEX/Imbalance etc.).

Required partners

TenneT, Chargepoint operators, Emobility Servicesproviders (and their charge card holders).

More information

Within a pilot project together with TenneT Senfal is developing the software that will enable the delivery of frequency containment reserve to TenneT. For this purpose we have forecasting algorithms that predict the (unknown) state of charge of the car, the duration of the charging session and at what time the charging session needs to be complete. As such, we calculate the amount of time charging sessions can effectively be controlled. This flexibility is now used for providing frequency containment reserve, but has value within multiple markets (APX, Endex, imbalance etc.).

