Map Database & Routing Service for EV Usage Optimisation

EVRMAP

05/12

ABOUT THE PROJECT

As the number of electric vehicles increases over the next years, so will the demand for a dense network of charging stations. The EVRMAP project provides electric vehicle (EV) drivers with information on where to find charging stations and how to find an effective route between destinations in the Nordic Region.

KEY RESEARCH QUESTIONS

- How can a common Nordic database of charging stations be established?
- How to develop a database and administrative interface for actors to maintain the information?
- How can a routing service for EV-drivers be developed and what physical factors are most important for an optimised route?

THE OBJECTIVE

The objective of the project is to establish a common Nordic database over electric vehicle charging and to collect data over charging points and stations. Additionally, the project will create a prototype of an EV-routing service tool as well as combine industrial actors in the process.

THE RESULTS

During the course of the project, EVRMAP has successfully launched an administrative interface to maintain the information for all Nordic countries. This administrative setup creates the foundation upon which a common, functional database can be built in the future. A fully established database was implemented in parts of the Nordic region, and setup to the NOBIL database. However, some issues pertaining the gathering of data was not properly solved due to e.g. legal disclaimers of the inaccuracy of gathered data. The project did establish a prototype for EV routing, that takes the following physical factors into account when optimising the route: charging station effect, range, elevation changes, energy usage, and regeneration of brake energy. The tool will help users to find the quickest route to the selected destination, including charging time and relevant factors, and can as such find a route optimised for quick and efficient charging over the entire distance. The source code for the tool can be retrieved from Sweco Position AB.

PROJECT PARTNERS

Sweco (SE & NO), Swedish Transport Administration (SE), Ericsson (SE), Eniro (SE), Volvo Cars (SE), The Norwegian Electric Vehicle Association (NO) and Northern Light Energy (IS).