

Case Study Estonia

Most of country's official priorities are the reduction of the negative effects of energy usage on the environment, the promotion of resource efficiency with sustainable consumption and production patterns and the reduction of CO₂ and other pollutants.

Estonia is a good example of a country which is trying to achieve these goals through electric mobility development. Estonia may not be the first country that comes to mind when you think of electric cars, but the small Eastern European nation was actually the first country in the world to install a nationwide network of electric vehicle fast-chargers. By the beginning of 2013, 165 fast-chargers have been installed around the country for the comfort of EV users. This report intends to provide a fact-based perspective on the status and current developments of the electrical car charging stations in Estonia.

BACKGROUND

According to the Kyoto Protocol, Estonia had to reduce its greenhouse gases emissions by 8 % in comparison with its 1990 level between 2008 and 2012. Estonia is participating in two Kyoto flexible mechanisms – international emissions trading and joint implementation. In March 2011, the Government of the Republic of Estonia concluded a contract with Mitsubishi Corporation for the sale of AAUs in the amount of 10 million AAUs to start the Estonian electrical mobility program. The program consists of three parts: 507 Mitsubishi iMiev electric cars were commissioned by the Ministry of Social Affairs as an example. Distribution of the purchase grant and the administration of the quick charging network is organized by Foundation KredEx.

ELECTRICAL VEHICLES IN ESTONIA

As Demo experience, the Ministry of Social Affairs took 507 Mitsubishi i-MiEV electric cars into use in 2011, that's the largest single order Mitsubishi has ever received for its little car. Estonia electrical vehicle market is very small due to Estonia's small population which is 1.34 million, but look like most other markets Nissan Leaf is the favorite electrical car for individual buyer in Estonia. Electrical Vehicle Charging infrastructure

ELECTRICAL VEHICLE CHARGING INFRASTRUCTURE

Estonia has become the world's first country to launch a nationwide fast-charging network for electric vehicles. The EV fast-charging network is operated by a national foundation KredEx, the chargers were produced and installed by a technology company ABB, the innovative payment solution was designed by NOW Innovations, and customer support is provided by a security company G4S.

Fast-charging points are distributed at all roads with dense traffic are covered, the distance between quick charging points is 40-60 km. Suitable and frequently visited places are considered as locations for quick charging stations, e.g. petrol stations, cafes, shops, etc, and all settlements with over 5000 inhabitants.

ABB's fast charging station they conform to the CHAdeMO standard, and each features a 50 kW DC and a 22 kW AC outlet.

The car's battery can be charged up to 90% in less than 30 minutes and – depending on the model – you will be able to drive for up to 140 km

EV CHARGING PAYMENT SUPPORT

Fast-charging network users are offered three service