Estonia electric vehicle range

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a dramatic change: driving ranges have increased to well over 200 km, with several car models stretching a single charge to 300-400 km (EV Database, 2020). Model selection now includes small city cars to family sedans to cargo vans and SUVs, with manufacturers from different parts of the world (Ibid.). In an attempt to boost the EV market and ...

The Electric Vehicles market in Estonia has been experiencing significant growth in recent years, driven by customer preferences for environmentally friendly transportation options, favorable...

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CO2 emissions exert a profound influence on climate and the environment, fueling the greenhouse effect and contributing significantly to global climate change. Nearly one-fourth of these emissions worldwide can be attributed to the transportation sector. Electric vehicles (EVs) emerge as a promising solution, potentially acting as a carbon-neutral alternative when powered by renewable energy sources. This underscores their pivotal role in mitigating the impact of traditional combustion engine vehicles on the environment.

The Electric Vehicle market is divided into distinct two distinct markets, namely Battery Electric Vehicles (BEVs) and Plug-in Hybrid Electric Vehicles (PHEVs). This categorization allows for a nuanced understanding of the market dynamics, considering the specific attributes and market penetration of each electric vehicle type. The emphasis on new car sales and their foundational configurations ensures clarity, while the exclusion of used vehicles and customizations maintains focus on the evolving landscape of electric vehicles.

If Estonia keeps pace with Europe, we could have more than 160,000 electric cars in eight years" time, instead of the estimated 3000 we currently have today. It is quite clear that a clean transport breakthrough is coming, but we have a lot to do to make the rapid transition as convenient and affordable as possible for those who use cars.

It seems that the combination of a growing range of electric car models, regulations, technologies, and people"s interest has brought us to a point where it is only a matter of time before electric cars reach the mainstream. To sustain the momentum, a big leap needs to be made in terms of both the availability and high quality of charging services.

The growth in the number of electric cars is already exceeding expectations at the European level; however, the availability of vehicles, fears about driving range, as well as fast and convenient charging are three key

bottlenecks that may start to hinder the clean transport breakthrough. For Estonia, price is also an important obstacle, as support measures have not changed over the years and the only option is the rarely offered one-off purchase subsidy, which is not very attractive for private customers.

Car manufacturers are driven by customer expectations when it comes to availability and driving range; however, when it concerns charging, the key levers are in the hands of service providers and grid operators. The future of e-mobility depends on a secure and resilient network and the supporting technology to smooth the introduction of electric cars.

One in five new cars in Europe last year was electric, but only one in fifty in Estonia. Research company EY predicts that there will be 65 million electric cars in Europe by 2030 and up to 130 million by 2035, i.e. around 40% of the current fleet. In Estonia, this would mean 160,000 and 320,000 electric cars, respectively. In Europe, the network is estimatedto be able to cope with this volume; however, if the share of electric cars in urban areas exceeds 50%, the balance on the network could be severely impacted, affecting security of supply.

Enefit Volt installed 28 new fast chargers in Estonia last year, bringing the total number to 200. Of the 15 counties, 13 are now covered by fast chargers suitable for all electric cars, and the numbers alone show that there are more than the average number of chargers needed. However, according to the European Alternative Fuels Directive there should be a 300 kW charging point every 60 km on Europe"s road network by 2025 and a 600 kW charger by 2030, which cannot be built commercially without subsidies.

Aside from cost-effectiveness, another major bottleneck is the time needed to deploy high-speed and ultra-high-speed charging points. EY suggests in its study that this could be accelerated by public support measures for grid operators, which would also increase the pace of the green transition.