

# Electrification of the Swedish transport system

Electric Road Systems, ERS, a contribution to reach a fossil free transport system

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**ABSTRACT:** There is a need for decarbonizing the road bound freight transports all over the world. The international Paris agreement about the climate challenge calls for action in every aspect of the modern society. The transport sector is addressed as well. Electric road systems, ERS, is one possible solution for reducing the carbon footprint from road bound freight transports.

**KEY WORDS:**Decarbonizing, Electric Road Systems, ERS, Freight transport

Heavy goods vehicles are responsible for almost 89% of product volumes transported domestically, while cars are responsible for over 90% of traffic work. Heavy goods vehicles travelling by road are responsible for around 25% of the road transport system's energy utilisation, and more or less the same percentage of carbon dioxide emissions. The Riksdag (Swedish Parliament) has made a decision on a climate law which will involve a compulsion to reduce carbon dioxide emissions from the transport sector by at least 70% by 2030, before reaching a zero level in 2045.

The main idea with electric road systems is to reduce the dependency of heavy vehicles on fossil fuels, to reduce carbon dioxide emissions and also to ensure good provision of transport for commercial purposes in the fossil-free society of the future. Good provision of transport of this kind must not involve impairment of safety or the cultural or natural environment.

Sweden has gained momentum as regards the development of ERS compared with the rest of the world thanks to active research and development work. Continued research, development and demonstration are of the utmost importance, and if it turns out that technologies emerge as early as the next planning period that would be appropriate to implement on a commercial basis, the Swedish Transport Administration will work to support earlier implementation, thereby helping to bring about faster development of the Swedish electric road system market.

Across the world ERS are being tested and demonstrated and Sweden believes ERS can be one of many needed solutions to make the transport sector free from the use of fossil fuels. Sweden have a deep innovationpartnership with both Germany and France and all three countries have plans to deploy ERS on their transport systems and together regulatory and standardisations issues are addresses and will probably be solved in the 2-3 upcoming years. Swedens goal is to have a number of mature ERS technologies to choose between and will therefore continue to cooperate with the the industry to demonstrate and test different kind of technologies.