

Electrified Road for Charging Electric Vehicle Wirelessly

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Abstract: Electric vehicles (EVs) are a promising solution for reducing emissions and improving air quality in transportation. However, one of the major challenges with EVs is the limited range of battery-powered vehicles. Wireless power transfer (WPT) is a promising technology for extending the range of EVs by allowing them to be charged while driving or parked. This project will investigate the feasibility of using WPT to charge EVs in dynamic and stationary applications. The project will focus on the following specific objectives: • To identify and evaluate the different WPT technologies that are suitable for EV charging. • To design and develop a WPT system for EV charging, taking into account the technical and economic constraints. • To conduct simulations and experiments to validate the performance of the proposed WPT system. The project is expected to make significant contributions to the field of WPT for EV charging. The project outcomes are expected to help in the development and commercialization of WPT systems for EVs, which will play a key role in the transition to sustainable transportation.

Keywords: Electric Vehicle, Wireless Charging, Solar Supply, DC Motor, Electrified Road

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