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Multi-Phase High-Power Dynamic Wireless Power Transfer System for Electric Vehicles

Dynamic roadway charging system powering EVs in motion for extended range and smaller batteries.

Researchers at Purdue University have developed an in-road wireless charging concept for consumer and commercial electric vehicles (EVs). This technology will enable wireless charging of EVs while driving, without the need to stop to charge. With Purdue's innovation, dynamic wireless power transfer can occur between the roadway and a moving vehicle at greater efficiency than previously possible. By charging vehicles en-route, the effective range of an EV can be increased while reducing vehicle battery size. This technology can be applied to industries where power needs to be transferred wirelessly to moving systems.

Technology Validation: This technology has been validated through testing of scaled down prototypes in a lab environment.

Advantages

-Wireless charging of EVs on roadways

-Significantly improved coupling coefficient (greater charging efficiency)

-Reduces required battery size in EV systems and increases effective range

Applications

-Electric vehicles and supporting infrastructure

-Sustainable transportation

TRL: 4

Intellectual Property:

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Authors
Dionysios Aliprantis
Aaron Dean Brovont
Steven D Pekarek

Further information
Matt Halladay
MRHalladay@prf.org

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