

## The Future of Wireless Charging Systems for Transportation

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### Abstract:

Over the past decade there has been significant development in light duty wireless charging systems. In the past couple of years, industry has begun to shift its focus towards heavy duty and dynamic systems meaning that academic research is moving from conceptual design toward systems that address many of the challenges that such publicly deployed systems must address. This includes interoperability, thermal management, robustness and cost.

While bespoke systems exist as demonstrators, the challenge of higher power wireless systems for transport applications is significantly more complex. This is because of the desire for interoperable charging systems to be able to work over multiple power classes with wide ranging ground clearances, and from a future vehicles perspective, to be able to work under both stationary and dynamic conditions.

The seminar begins by discussing the light duty status and some of the reasons for the choices made that have found their way into the standards. It will then describe some of research being undertaken that is targeting the future goal of a truly electrified transport fleet without the need for being tethered to a charging cable.