

Wireless Solar Based E-vehicle Charging Station

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Abstract: *The integration of solar panels with wireless Electric Vehicle (EV) charging systems presents a promising solution for sustainable and autonomous energy transfer in electric mobility. By harnessing solar energy, these systems can generate clean, renewable power to charge EVs wirelessly, reducing dependency on the grid and promoting eco-friendly transportation. Solar-powered wireless EV charging systems typically combine photovoltaic (PV) technology with inductive power transfer (IPT) for energy delivery, offering a cleaner alternative to conventional charging methods. This technology enables the deployment of charging stations that not only provide energy to EVs but also contribute to reducing carbon footprints by utilizing renewable energy. Key challenges include optimizing solar energy conversion efficiency, ensuring effective energy storage, and addressing variability in solar power generation due to weather conditions.*

Keywords: Renewable power, Carbon footprint