

Solar Roadway – A Significant Infrastructural Reform

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Abstract: *Solar roadways are basically structurally engineered solar panels, which can easily and effectively pose as conventional roads; the only difference being smartness and intelligence. These solar roads are very much intelligent by themselves and perfectly suited for the current era's development; hence, they have been appropriately termed as 'Smart Roads'. The main motive is to fairly minimize the use of conventional asphalt and concrete roads, parking lots, and driveways, and to supplant a majority of them with solar road panels. These panels will be responsible for generating clean renewable energy, which, in turn, will be used to power a specific area or even an entire developed city. An intelligent highway infrastructure and a self-healing decentralized power grid will effectively help in reducing the use of fossil fuels, and consequently, limit the emission of greenhouse gases considerably. This will result in a 50 % decrease in the air pollution of that particular area, where this technology is used. All these goals can be achieved by paying just a little extra. It is time to upgrade our infrastructure for the betterment of the not-so-distant future as this smart system pays for itself. These advancements in infrastructure will not only promote sustainability but also pave the way for a cleaner and more efficient transportation system.*

Keywords: Electric Vehicles, Fossil Fuels, Intelligent Roads, Smart Grids, Solar Panels, Solar Roadways

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