

SOLAR PANEL ROADS FOR FOOT PATH

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ABSTRACT:

India has the second-largest road network in the world and is blessed with about 300 days of sunny weather. India does not have enough electricity to even power all its cities, towns and villages. In order to make the solar power a viable economical option, open spaces that are situated close to the high energy demand areas must be identified. Hence, it is proposed that open spaces such as the roads, parking lots, bicycle lanes, footpaths etc be utilized for this purpose. All great cities have one thing in common - clean, wide, pedestrian-friendly roads. Chennai, with an eye on the future, is planning huge investments to build roads that encourage walking. Therefore solar panel footpaths can be implemented in Chennai. In this context, a solarpowered foot paths that generates electricity sounds like a good idea. Solar panel footpaths are a modular system of specially engineered solar panels that can be walked upon. Solar panel tiles are made of acrylic glass protecting crystalline silicon solar cells, which can support the weight of the pedestrians. Solar panel consists of three layers, road surface layer, electronics layer and base layer. Solar panel tiles use solar panels, photovoltaic effect, LEDS and microprocessor chips with circuit boards. The renewable energy generated by solar panel footpaths will replace the current need for fossil fuel which is used for generation of electricity.

Keywords: solar panels, foot paths, roads, mechanical properties, tiles.

[1] INTRODUCTION

The Solar Roadway is a series of structurallyengineered solar panels that are driven upon. The idea is to replace all current petroleum-based asphalt roads, parking lots, and driveways with Solar Road Panels that collect energy to be used by our homes and businesses. Solar roadways can save our country from energy crisis and climate change. The solar roadways gives answers to our deteriorating highway infrastructure, our crumbling power grid, and the climate change. As the day by day the price of petroleum products are getting huge hike and resources are very less there will be no longer feasible material such as asphalt for our road surfaces. The renewable energy generated by solar road panels will replace the current need for fossil fuel which is used for generation of electricity as also oil used for driving the vehicles which in turn reduces the greenhouse gases nearly to half. The implementation of Solar Roadways Technology will create the clean energy boom, spurring private investment on a massive scale, with relatively little extra cost.

Limitation of petrol, diesel and other fossil fuels in nature will create a resource crisis in near future. It's hazardous pollution and global warming is creating severe environment problem even for the survival of human. This has attracted attention all around the world and alternative resources and technologies. The concept of solar roadways is to replace the all traditional fuel


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