



## Methods of Obtaining Electrical Energy from Sidewalkways

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**Abstract:** This article discusses the basics of using and designing sidewalks and sidewalks in highways to generate electricity, and their relevance and importance.

**Keywords:** pavement, deformation, geometric, intensity, energy.

### INTRODUCTION

History has shown to humanity that since the first awakening, mankind has been using a variety of energy sources to improve their living and working conditions. From steam engines to today's state-of-the-art Tesla cars, humanity has been getting energy from fossil fuels and now from sunlight. Of course, it is difficult to imagine the present life without these energies. In order to change the way of life and pass on the mineral wealth to the next generation, it is necessary to implement new ideas. For example, smart homes are being built using solar energy. Large cities and industrial plants are using solar panels and wind turbines to generate large amounts of electricity in large areas to provide power. [1]

### Main part



**Figure 1. Use of solar energy on highways.**

With the passage of time, innovative solutions and ideas for energy production are rapidly evolving. For example, as a suggestion, we want to promote the production of electricity as a result of the deformation effect on the movement of people and cars [2].



**Figure 2. Generation of electricity as a result of pedestrian movement.**

It can be seen that instead of the sidewalks where pedestrians move on the roads, it will be possible to generate electricity from the deformation voltage caused by the movement of pedestrians, as shown in Figure 2. Uzbekistan is rich in natural resources, one of the largest in Central Asia is the energy market with a installed capacity of 14.1 million kW, of which 85% of the installed capacity is thermal power plants. Crosswalks and sidewalks will be designed not only for traffic but also for pedestrians. Of course, power generation on the roads using a certain type of equipment has been and is being used in practice. These devices can generate electricity by placing small solar panels on top of the streetlights. In this process, light energy can be converted into electrical energy, which can ensure the operation of lighting equipment from road equipment [3].

### Conclusion

Ignoring energy independence, aging infrastructure, and poor supply lead to power shortages, inefficiencies, large losses, and low reliability. At the same time, the growing domestic demand and demand for gas and oil exports puts pressure on the country, the need for safe actions to diversify energy production and make efficient use of its energy consumption potential.

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