



ENERGY HARVESTING: ROADWAY BUMP

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Product Description

The present invention aims to prepare a mechanism to harvest energy from road's bump. This mechanism consists of bump, springs, linear bar gear, gears, holding shafts, dc motors, booster inverter and battery. It converts kinetic energy to electrical energy using mechanical compartment installed in the system.

In the busy traffic situation, vehicle approaching the road bump and ramps it repeatedly. Road bump moves the linear rack gear up and down. Using one way bearing, this force has been transferred continuously to the dc motor shaft with the attached pinion gear. The dc motor shaft will keep on rotating in both positions, whether the linear rack gear is moving up or down. As the shaft is continuously rotating, the dc motors will start to produce electrical energy and been transferred to the battery.

Eco- Friendly Aspect

- Reducing the cost of energy usage.
- Elimination of pollution by reducing the unbuilt hydroelectric dam.
- Maintain the right ecosystem of flora and fauna

Problem & Causes

- Statistically, one of Malaysia citizen owns at least two types of vehicles. These redundant usage of transportation could benefit us such as in energy harvesting.
- Malaysia is solely depends on hydroelectric energy as main source. When dam is empty, less energy could be generated.
- Cost of energy being supplied is high.

Application & Market Potential

We are confident on the machine marketability because of its capability to solve many problems in energy supply. This machine could maintain the good environment and ecosystem, yet also could generate energy for human being usage.

Furthermore, this project is universal and marketable which it can also be used for individual purpose and big industry. This machine benefits them in terms of cost saving, easy installation and small area of usage.

Originality & Novelty

Kinetic energy is the energy of motion. The accelerating of an object from a rest position to a certain velocity takes energy as long as its speed does not change. When the object decelerates, that energy from its motion can be transferred in various ways. In this project, the same concept has been applied.

