

Team Name: Auto generation of electricity using Speed Breaker

	Name	Branch and Semester	Contact Number	Email- ID
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Note:

1. One can participate either as a part of a team or an individual basis. Switching teams is not allowed.
2. The uploaded ideas will be screened to go to the second round.
3. Judging: competition entries shall be judged, or winners selected based on the following criteria
 - Is the problem worth solving
 - How innovative or novel is the idea
 - Scientific accuracy
 - Social impact
 - Scalability
4. Decisions of IIC JSSSTU in respect of all matters to do with the competition will be final and no correspondence will be entertained.
5. In second round, the selected teams will have to present their idea in front of the jury panel.
6. Payment of INR 50 should be made to the UPI ID anju.marina.lobo@oksbi and submit the transaction ID above.
7. Idea should be submitted in **.pdf** format.

Abstract: (not more than 150 words)

In this modern world, electricity is one of the most basic needs of human beings. It is very difficult to imagine our life without electricity. So our idea is to produce electricity with the help of magnetic field based on Faraday's law. This is an alternative source of energy. Our aim is to provide electricity in remote areas for street lights and similar requirements.

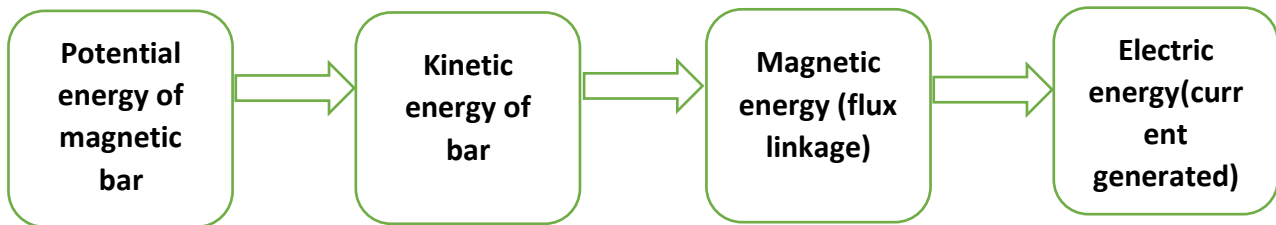
Introduction (not more than 200 words)

Electricity can be generated using different methods such as hydroelectric power generation, windmills, solar power etc. Here we are using a technique of producing electricity using magnetic field. We are doing this based on faraday's law which states that, when the magnetic flux linking the circuit changes, an electromotive force is induced in the circuit proportional to the rate of change of flux linkage. Here magnetic coil is placed below the surface of speed breaker on the ground.. A magnetic bar is attached to the below surface of the speed breaker. The speed breaker should be made up of elastic type material with suitable coefficient of elasticity. Whenever a vehicle moves over the speed breaker, it deforms and the magnetic bar attached to it moves inside the magnetic coil. Due to the movement of bar, magnetic flux is linked to the coil. The rate of change of magnetic flux generates electric current and this current is used to supply electricity for street lights and other small electric purposes in remote areas.

Motivation (not more than 100 words)

Since electricity plays major role in our day to day life, it should be produced in a very large quantity to serve our basic needs. But producing electricity is not a very easy task. We may face many problems like water scarcity may cause difficulties in hydroelectric power generation, wind is unpredictable in the case of windmills and sunlight is not always available for solar panels. It becomes difficult to generate electricity in these cases. So by using the speed breaker these problems maybe reduced to some extent.

Methodology (block diagram, related figures etc)



Social Impact

It is difficult to implement this idea using single speed breaker as people will get to know about it and they may not reduce the speed whenever they see it. Instead of using single speed breaker, it is better to use multiple speed breakers with some space in between, out of which, one or two will be made up of elastic material and rest of them will be normal speed breakers. This will also reduce the cost per unit of electricity and it will also help the village areas as a alternative source of electricity.

Market Survey

Generally, speed breakers are used to reduce the speed of vehicles and also to prevent accidents. The speed breakers which we are using here does both the work and also helps in generating electricity. We cannot sell this directly to general public but this can be brought into the notice of government and they can implement it to help the common people through electricity board (for ex: MESCOM, BESCOM etc).

