

Creating Free Energy by means of Social Innovations

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ABSTRACT

Each developing economy is low on supplying energy to the rural areas and even Sub-urban areas. To reduce this mismatch of supply and demand of energy, Government takes huge steps every fiscal year by setting up of Thermal Power Plants, Nuclear Power Plants and Thermal Power Plants to generate electricity, but the burden of heavy investment (lakhs of crores) directly affects the public investments. This burden comes back to the public in terms of increase in Tax Revenue Structure. To avoid this vicious circle of demand of power and then paying for this demand through taxes it becomes essential to find alternative methods of generating power which should be pollution-free as well as cost-effective. Here comes the role of social innovation, where people are encouraged to generate electricity by cycling their way to health.

Keyword: - *Free electricity, Social innovation, Bicycle generator.*

1. INTRODUCTION & LITERATURE REVIEW

A recent study notes that “there is social innovation wherever new mechanisms and norms consolidate and improve the wellbeing of individuals, communities and territories in terms of social inclusion, creation of employment and quality of life”. Social innovation, where people are encouraged to become self-dependent and contribute to the social cause. One way is to generate electricity by cycling their way to health. In the recent years India has emergence of social enterprises as a potential alternative development channel, where these enterprises can undertake social and development improvements in a more financially sustainable manner than other kinds of programs. However, to innovate and grow their social enterprise, entrepreneurs need to interact with other actors, including fellow entrepreneurs, suppliers, wholesalers, investors, incubators. Here, innovation, defined as the continuous process of upgrading using new knowledge or the new combination of existing knowledge that is new to the local area, is generally seen to emerge from a system of actors whose interactions, behavior and patterns of learning are conditioned by institutions (Freeman, 1987; Lundvall, 1992; Edquist, 1997). [2-4]

2. PROPOSED SYSTEM

Bicycle generator consists of a very basic stem involving just three components-alternators (Input -100Rpm, Output 14V), Single Tyre Cycle (Pedal Powered with gear arrangement and coupling to alternator), battery (12V/36A) and inverter (230V/1KVA).The main concept behind creating. Free-energy is to convert mechanical energy to rotational energy and then rotational energy to charge the batteries which will be converted to Electricity that can power community places like schools, hospitals, colleges, parks and the benefits can even be extended to individual residences.

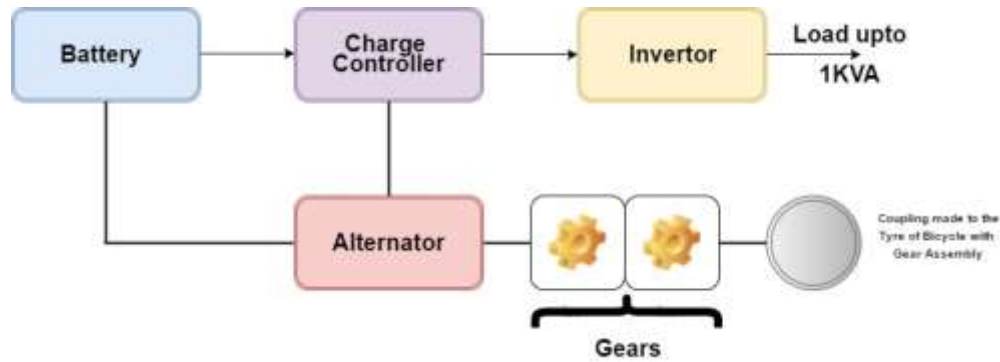


Fig -1: Block diagram for Human Powered Generator System

3. HUMAN POWERED GENERATOR DESIGN

In this design the Battery is the main source of power for the inverter which has a output capacity of AC-220V/50Hz/1KVA. The charge controller is a custom designed electrical device which measures and displays the Battery Level Status in terms of led indicators. The charge controllers decides when the battery should be connected to the inverter and when it should be charged from the alternator internally, it is always connected to the Battery and runs on just 3.3V DC .The charge controller is microcontroller driver preferably a microchip PIC, because of its Lowe power consumption and high current driving capabilities of it ADC Channel. The Alternator is always connected to the bicycle tyre with the help of gears in ration of 10:1.So if the charge controller indicates battery requires charging then the user is required to pedal the cycle at close to 100rpm for a minimum period of 30minutes.For a cycling duration of 30minutes we are assuming the batteries will be charged for 25% of the battery level. The cycle is equipped with gears to reduce the amount of energy required to maintain the speed of the bicycle to power up the battery. For understanding the system better, flowchart is also provided below.

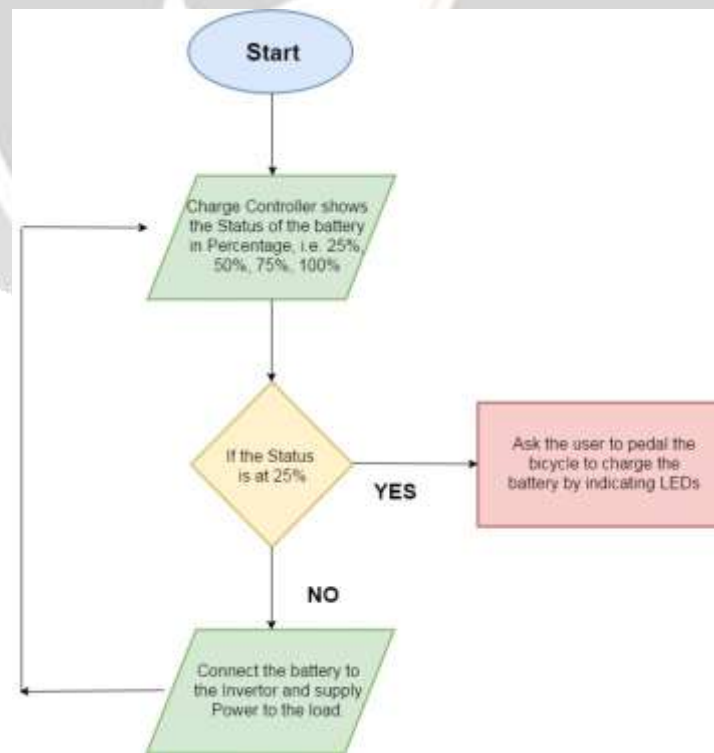


Fig -2: Flow chart for the Proposed System

4. CREATING INTERESTS AMONG DIFFERENT AGE GROUPS

A. Schools:

Concept of Free-energy and the power of social innovation should be provided to students from a very young age. As early as 7years, students should be made aware of the concept and impact of creating free energy with the help of Pictures, Charts, and Documentations. Once student understand the importance of reducing the dependency on the natural resources to create usable energy then they can feel part of the change. In all the gym classes in schools cycling should be replaced as the prime method of warming before any physical activity like swimming, athletics, cricket, football etc. This way we can create energy without even applying additional stress on a young body. Every gym class should have a large display (MONITOR, SCREEN) indicating the amount of free energy generated at the end of each session and reward points gained by the batch. Each high -scoring batch of Generation of Free Energy reward points at end of each year should be rewarded with meritorious certificate and other prestigious recognitions so that a healthy competitiveness is encouraged among the students. Later, the surplus energy produced from the activities can used to provide clean water, streetlights and mobile charging points for everybody.

B. Public Gyms:

Most Public parks and society gyms can also be integrated with this social innovation structure. The people who are visiting these places can offer their services and in-return get good health. Cycling a speed of 10-20% of the age will reduce the body fat percentage by 2% every day in normal conditions. People can see the amount of energy consumed in form of calories burnt shown on the display of the cycles. People should be rewarded with discount coupons from. Various sites for daily needs like grocery shopping, airline ticket booking etc. The energy generated can be used to supply power to the whole premises of the public gym. So that it keeps the net sum zero for power required in operating the public gym.

$$\text{SURPLUS POWER} = \text{POWER GENERATED} - \text{POWER CONSUMED}$$

5. CONCLUSIONS

In current energy crisis worldwide, the importance of awareness of energy conservation is essential for the existence of human race. Children of today will become adults of tomorrow, if we incorporate a sense of responsibility and encourage efforts to generate more energy than consumed, will significantly reduce the burden of dependency on non-renewable resources and create a greener future for many more generations to come.



6. ACKNOWLEDGEMENT

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7. REFERENCES

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BIOGRAPHIES

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