

Review on Re-Utilization of Light: Using Conservation of Energy

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Abstract— This paper proposes effectual use of the heat energy for the street light as well as home appliances. The main objective is to make a bulb or fluorescent light which can charge by their own energy and we can save huge amount of energy. As we know that, there is the cries of energy all over the globe. So, the main motive that we can reuse the thermal energy that is generated by the fluorescent light using plate and store the potential energy in a device called as “battery” and reuse the heat energy. This paper presents the conservation of energy along with the storage of Light energy and continuous use of electrical energy without any external current. The demand of energy in our country is increasing exponentially day by day. Re-Utilization can be best and efficient solution for the upraise energy demand. Re-utilization of energy can reduce the energy consumption by using the cyclic process of the utilization of energy. [1] Energy conservation can enhance by effective policies and its factors to preserve the energy conservation and to the subsequent behavior.

Keywords: Light System, Energy Conservation, Batteries, Primary Circuit, Secondary Circuit, On-Off Controller

I. INTRODUCTION

Energy is the most important factor to decide the success of a Nation. Energy is defined as the property that transferred to an object to perform work on, or to heat, the object.[2] Energy based on the law of Conservation of energy that states that energy neither be created nor be destroyed it only can be converted in forms.

As we know that, the share of energy consumption has been raise day by day due to population explosion, intensive growth of IT and related business and urbanization development of the country is highly depends on the availability of energy.[4] Hence, the demand of the for the nation is the important task to imperishable development of the country. Energy conservation may result in increase of financial capital, environmental value, national security, personal security and human comfort. [3] Everyone wants to conserve the energy for reducing the costs. It is important to reduce peak and average demand of energy. It seems that the investment in energy and conservation is highly cost effective. It is possible to save energy with the implementation reuse and recreate the energy using light source.

Reutilization of energy optimize the use of capital resources and it save huge amount of capital investment in power sector. [5]

II. WORKING PRINCIPAL

The working principal of the proposed design is that, the potential energy converted into the electrical energy and the electrical energy converted into light energy which generates the heat and we can transform the heat energy using PV plate

which is use to transform the heat(thermal) energy into potential energy and using thebattery we can store the charge into the battery and this cycle continuous going on when the switch is ON and circuit becomes complete and due to heat of light we can charge the battery and reuse the energy and by this principal we can reuse a huge amount of energy for recreating the light.

III. METHODOLOGY

A. Architecture:

It contains fluorescent lamp, Photovoltaic system, battery, primary circuit, secondary circuit etc.

Blub is connected with a battery through the primary circuit and battery have potential energy which is converted into electrical energy to flow in the wire and at the end its coverts heat energy or light energy using the fluorescent lamp and producing heat energy. [6] Using Photovoltaic system that absorb heat energy as a source energy from the fluorescent lamp and converted to direct current electricity or we can use phase change material (PCM), when input which is heat energy melts the material and its phase change from solid state to liquid state and store energy. [7] When the PCM become cool back and its melting point is below than, it turns back into a solid, at which point the stored energy released as heat.

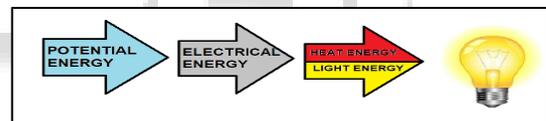


Fig. 1: Utilization of Energy

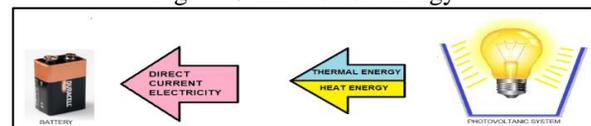


Fig. 2: Reutilization of Energy

B. Advantages:

- 1) It is use to save huge amount of energy.
- 2) It is used mostly in urban area and where having electricity problem.
- 3) Only first time we have to charge battery than it is charge by the heat energy
- 4) It is Cheaper with respect to electricity.
- 5) It can be use in Home Appliances.
- 6) It helps to grow and develop the country.
- 7) It helps to store Direct current.

C. Disadvantage:

- 1) It takes some space.
- 2) Its life depends on battery.

IV. CONCLUSION:

It is use to reutilize the energy using Photovoltaic system and the “law of Conservation of Energy” which states “Energy neither be created or nor be destroyed it only transform from one body to another” the same thing is the function of this Reutilization of energy. By this process, we can save huge amount of energy. Places like home or like industries where sunlight can’t reach and due to this, we cannot use sunlight at these kinds of places and electricity is costly and, in less amount, so we can use reutilization of energy for the betterment of the country. Energy saving is the gesture of future. An energy is effective home for private step towards renewable energy, environmental protection and feasible living. It’s helps to the Consumer to minimize the electricity bill and provides outstanding investment.

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