



## Innovation and Entrepreneurship Development Centre (IEDC)

The Innovation and Entrepreneurship Development Centre (IEDC) of National Science and Technology Entrepreneurship Development Board (NSTEDB), Department of Science and Technology (DST), is being promoted in educational institutions to develop institutional mechanism to create entrepreneurial culture in S&T academic institutions and to foster techno-entrepreneurship for generation of wealth and employment by S&T persons. The IEDCs are established in academic institutions (science colleges, engineering colleges, universities, management institutes) having requisite expertise and infrastructure.

The mission of the IEDCs is to "develop institutional mechanism to create entrepreneurial culture in academic institutions to foster growth of innovation and entrepreneurship amongst the faculty and students ". With furtherance to this objective of IEDC, innovations and innovative products developed by Institutions all over the country will be included in the e-zine Science Tech Entrepreneur. The first in this series is the Rechargeable Table Lamp developed by IEDC, University of Kashmir.

## INNOVATIVE RECHARGEABLE TABLE-LAMP

Students and scholars living in rural India, particularly the border States like Jammu and Kashmir, suffer under the shadows of darkness because of non availability (or frequent cuts) in electricity supply. Non availability of un-interrupted power supply in Kashmir causes great inconvenience to the inhabitants of such areas. The students and scholars suffer particularly in terms of late-night studies due to disruptions in electricity supply. The snow-falls during the winters disrupt the power supply further for months together in rural as well as urban areas in Kashmir. The alternative options, in terms of kerosene and gas lights, are not only expensive but have global warming effects as well. Many incidents of accidental fire resulting into loss of property and life, have also been reported in Kashmir, particularly, during winters due to late night use of kerosene and gas lights by the students.



The "Innovative Rechargeable Table-Lamp" has been invented by Entrepreneurship development Cell (EDC) of the University of Kashmir, to mitigate the problems faced by the students and scholars living in rural India, particularly those living in Kashmir. The proposed gadget will not only be used as a table lamp, but will render its use as a home-light, torch, night-lamp and as an emergency light. The proposed gadget will mitigate most of the crises faced as a result of non availability of electricity for lighting purposes.

The Rechargeable Table Lamp has been housed in a papier-mache cabinet. This combination with papier-mache, which is a famous Kashmir handicraft wherein articles are made of waste paper, applied in layers and pressed together on wooden moulds. Craftsmen breathe life into this mould with their vivid imagination, bringing out a variety of expressions on masks, etc. The craftsmen of Kashmir turn a variety of utility items, of Papier Mache, into fabulous decorative pieces. Designs in the shape of flowers and birds, and the heart shaped Kashmir Chinar leaf, add life to the objects. Bright and ethnic colors like peacock blue, dark green, brown etc. are used for the craft. Papier mache items are among top handicraft items sold to tourists in Kashmir.



This marriage between technological innovation and art in the form of this gadget will not only find a market in Kashmir as an alternative home-light or reading-table lamp, but will also become an attractive tourist purchase within and outside Kashmir.

The gadget has the following innovation merit and business advantages:

- It has a large battery back-up of up to 30 hours.
- It has light intensity control.
- It has charging indicator, full charge indicator and deep-discharge indicator.
- It has a night lamp.
- It can be charged through AC-mains supply or solar panel.
- The design of the gadget facilitates its use as a table-lamp, as a home-light, a torch, a night-lamp or as an emergency light.
- The whole assembly is housed in a papier-mache artifact cabinet, thereby blending a scientific solution with Kashmir art.
- Cheap versions of the gadget, with the same technical specifications, housed in plastic cabinet can be affordable to poor students and scholars.

## **Cost of Manufacturing**

The device shall have at least two models:

### **Tourist Model**

The device consists of a wooden cabinet with papier mache art work more or less similar to the photographs communicated. The cost of manufacturing such art-work cabinet in Kashmir will be approximately Rs. 1200 to 1500 as per present rates. Any number of such papier mache cabinets can be manufactured within reasonable time in Kashmir, since there are several artisans of Papier mache art and also because Kashmir has abundant forest land for facilitating the required timber.

### **Low-Priced Domestic Model**

The device will be housed in a plastic cabinet which can be manufactured by any plastic moulding unit in India. The cost of such cabinet will range from Rs. 100 to 150.

Both the models will house the basic device consisting of the electronic circuitry and other components. The manufacturing cost of this assembly will be approximately Rs. 300.

### **Raw Material Required**

Cabinet (Wooden with papier mache/plastic)

Battery: 6V, maintenance free rechargeable battery

Transistors, Diodes, resistors, capacitors, High-intensity white LEDs, DC/AC switches, LED indicators, connecting wires and custom PCB.



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**Note:** The author may have used various references in the preparation of this article. For further details please contact him/her.

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