

Handing power to the villages

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Well before dawn breaks in a remote Jharkhand village, the first thing a 13-year-old girl does is to hand-wind her lantern, and then gets down to homework. But, in many Indian villages, smoky kerosene lamps are all that keeps the darkness at bay. However, kerosene is a dangerous and increasingly expensive source of light for the many Indians who still do not have access to electricity.

But, now a new revolutionary, renewable and clean energy product is showing the light, quite literally in many rural homes. The Kisan Torches and Lanterns manufactured by the Freeplay Energy Group and distributed by IFFCO (Indian Farmers Fertiliser Cooperative Ltd) need no batteries, no kerosene, no electricity and come with a very long shelf life including one year warranty

They're ideal for emergencies and outdoor/indoor activities, and are also good for everyday use in their homes. After all, what's more renewable than human power? Both the torch and the lantern give you about 15 to 20 minutes of shine per every minute of cranking, which is pretty good for a small hand-crank device. Also, the cranking does not need to be done at one go but can be done at convenient intervals.

With all of the emphasis on saving energy and eco-friendliness these days, hand-crank technology



has seen increased use in devices ranging from torches and cell phone chargers to generators. The Freeplay Energy Group designs, manufactures and markets a range of portable products that make use of human energy. Freeplay Energy's core technology revolves around the efficient conversion and storage of applied human energy and the delivery of this energy on demand as electricity to create self-powered electronic devices. Initial applications include torches/lanterns, radios (both consumer and humanitarian), mobile phone chargers and standalone foot chargers and the company has a new product development plan which anticipates broadening the application of its technology into numerous new product categories.

The 45% or so of people in India hooked up to a power grid suffer chronic, daily power cuts. Others trek long distances to buy a few expensive litres of polluting kerosene for lamps, often finding no supplies, much of it is sold in the black market to dilute petrol and diesel fuel. Batteries are one solution, but batteries are expensive and require frequent replacement. Further their disposal continues to provide environmental nightmares in the absence of an effective waste disposal policy. It is imperative that we move away from fossil fuels and look towards other alternatives sources of energy, which is efficient, clean, and inexpensive if we have to serve the needs of the rural population of the country.

Human kinetic energy is an important renewable source and can



be transferred in a number of ways. Human energy is most commonly used to propel bicycles, but can also be used to generate electricity and power hand-crank tools. Some third world organizations are implementing human powered technologies to generate electricity to power computers and other appliances. In a time when many people are focusing on solar power or wind power as the main renewable resources, what is often overlooked is good old human power.

Everyone is convinced that 'with the climate change a worrying issue and oil prices on fire, renewable energy is no longer an alternative option but the only way forward'. This is all the more relevant in the remote villages and the rural areas of the country that do not have access to conventional sources of power at all. Dependence on kerosene for lighting their homes costs dearly both in financial terms as well as affects their health. Renewable energy is the answer in this context and Freeplay Energy India (P) Ltd has made a modest but definite beginning in harnessing the human and animal energy for generation of quality light for the rural homes.