

Lantern offers cheap lighting alternative

A prototype lantern produced by an international NGO, which is being demonstrated in the outskirts of this Rift Valley provincial headquarters is shedding light on the otherwise dark nights of the area's poor. WANGULU ELIEZER reports.

Night studies have become an enjoyable experience for young James King'ori who attends Kagoto Primary School in the outskirts of Nakuru town, thanks to a new lantern that is being demonstrated in this area.

Ngashura area of Bahati division, where the lantern is being tested, does not have electricity.

"The lantern is so bright. It makes my night study enjoyable," say the standard six pupil who has taken responsibility of ensuring that the lantern is clean and kept safely.

Most residents of Ngashura area that is situated on the Nakuru-Nyahururu road, are ordinary peasants who cannot afford solar home systems or money required to extend electric power to their farms.

But now, there is light at the end of the tunnel as Intermediate Technology Development Group (ITDG), an international non-governmental organisation, endeavours to provide affordable lighting technology.

Already, 13 area residents have benefitted from lanterns that were designed by ITDG consultants in London.

"The lantern has an in-built battery that can serve for two years without any problem" Stephen Gitonga, team leader of ITDG's energy program, says. It has

an extension lamp and an AC/DC charger.

Besides, each recipient of the lantern gets a solar panel that is used to charge the battery during the daytime.

Beneficiaries also get radios, which are powered by the lantern.

According to Lily Murei, project officer at Sustainable Community Development Services (SCODE), the 13 lanterns that were introduced in Bahati division last December are popular with the users. ITDG has a working partnership with SCODE through which the latter distributes the lanterns. SCODE's technicians also install the 10W solar panels.

Says Don Redding, ITDG's public affairs manager "Solar home systems and electricity are beyond the reach of many people in Africa, Southern Asia and even Latin America. This is why ITDG consultants came up with this lantern. We hope it will be affordable" he said.

Demand for wood-fuel, which is most popular with urban and rural poor in Kenya is projected to rise to eight million tones of oil equivalent to 11 million tones this year. Electric power will thus remain beyond the reach of the majority.

Rural electrification is yet to be achieved in most areas because most people who are supposed to benefit from the scheme cannot afford to pay the required dues. As a result, many rural and urban poor rely on wood-fuel or kerosene for both lighting and cooking.

Beneficiaries in the ITDG lantern demonstration area pay Ksh 7,500 to get the lantern and its auxiliary. Those who

cannot raise the entire amount are allowed to pay in instalments subject to a deposit of Ksh 1,500.

“The cost is well within the reach of the majority who cannot afford solar home systems. Most companies installing solar home systems are asking for an average of Ksh 50,000” Ms Murei says.

James King’ori’s mother, Margaret Wairimu, 40 says the lantern is economical.” I no longer budget for paraffin and dry cells,” says the mother of seven. She said her lantern gives her six hours of lighting when fully charged by the solar panel.

However, the lantern gives her less hours of service if she uses it and the radio simultaneously. Mr Gitonga concurs, saying a fully charged battery will serve for five hours if used for lighting only. “The hours of service are reduced if you light and use the radio at the same time” he says.

However, the lanterns, according to Mr Redding, are prototypes and will be improved upon before mass production for a wider market. “We are interested in feedback from those who have acquired them before redesigning them and later manufacturing for commercial use” the ITDG public affairs manger said.

Redding said his organisation would look for a Kenyan partner to manufacture the lanterns. Besides addressing the energy requirements of the poor, the lanterns are also ideal for outdoor activities such as camping and picnics.

Currently the cost of manufacturing one lantern is US\$ 50 to 70. It is feared that the cost of commercial production may force the price up, defeating the purpose of the invention – to serve the poor. ITDG would like the price to remain below Ksh 10,000 when commercial production starts.

Some beneficiaries feel the lanterns should be redesigned. “The lantern gives excellent light and can light a wider area. But there is a need to increase the duration of service” Mr John Njenga, a beneficiary says.

Other feel that the lantern needed a baton to show when the lantern’s battery was full charged. The batons, they suggest, should indicate whether the lantern is on or off. This would be useful in charging.

“The problem with these lanterns is that you cannot tell when it is on or off. Most people have been charging them when they are on, only to allege that they are defective” John Omondi, a technician with SCODE says. Batteries should not be charged when the lanterns are on. The lanterns are robust and are made mainly of thermoplastics. They are portable and can withstand hard falls. But most of the materials will have to be imported when local production commences.

Similar demonstrations are also being carried out in Machakos district. Mass production will start in May, and the lanterns will thereafter be available in retail outlets for Kenyans to buy. The lantern promises to be a milestone in the energy sector for it is set to illuminate the dim lives of the poor

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