Solar best way to combat light poverty in Africa

By Reggie Nxumalo

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It's been 137 years since the lightbulb was first invented and there are still more than 1.5-million people globally who spend their evenings in the dark, unable to access electric light. While this might seem trivial, the reality is that this lack of access leads to more than 1-billion needless deaths every year as a result of the use of non-electrical light sources.

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Every year these people have to resort to candles, kerosene lamps and fires to counter darkness.

In 2015 the United Nations launched its International Year of Light. The global initiative saw the United Nations Educational, Scientific and Cultural Organisation bring together a large consortium of stakeholders. Included were scientific societies and unions, educational institutions, technology platforms, non-profit organisations and private sector partners. Throughout 2015, they highlighted the impact of light on social and economic development.

Major socio-economic effects

No access to light also has major socio-economic effects and has been inextricably linked to poverty. Countries with the lowest levels of electrification also have the highest levels of poverty. In Liberia, for example, just 2% of the population has regular access to electricity and as few as 1.5% of people in South Sudan provided access to electric light.

Light poverty means children who attend school cannot study at night and that businesses operating in these communities have to shut down when the sun sets. Access to electric light is imperative if communities are to thrive. The World Bank estimates that of the 1.1-billion people without access to electricity globally, half live on the African continent. The lack of electrification is most prevalent in rural areas in Africa.

Where the infrastructure does exist, people often suffer with unstable grids leading to intermittent and regularly interrupted electricity supply forcing them to resort to candles, fires, and kerosene lamps which also pose an environmental hazard as a result of increased emissions.

However, solar LED technology can provide light at a fraction of the cost of running kerosene lamps, without any of the health, safety or environmental dangers – or the need for major investment in infrastructure.

Low-cost alternative

Research by the United Nations Environment Programme (UNEP) shows that solar-powered LED lighting provides a low-cost alternative that not only alleviates light poverty but also reduces carbon emissions, indoor air pollution, and health risks.

A single solar-powered LED lantern uses zero energy and can fill a room with clean, electric light for a one-off cost of $10-20 (£7-14), compared to the $50 (£33) annual fuel bill of running a kerosene lamp.

On a larger scale, energy efficient LED luminaires and solar panels can be combined to produce sustainable lighting in public places and bring communities to life outside of daylight hours. These Community Light Centres (CLCs) allow healthcare services and businesses to operate after sunset as well as encouraging sports and other social activities.

Philips is in the process of installing 100 CLCs across 12 countries in Africa, where some 500-million people do not have access to light.
Going off the grid and relying on solar power is be the best way to alleviate light poverty in Africa. Not only does it allow for lowered infrastructure costs, it also means clean and sustainable energy.

It will also drastically lower the number of deaths caused by the use of candles and kerosene lamps and most importantly, it will mean that communities that have tried to survive in the dark will now be able to perform the basic tasks that will help them thrive.

ABOUT THE AUTHOR

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