

Solar powered chargers – making good progress

There are three industry initiatives that I have been closely following over the past few years.

The first is the campaign to implement a cross-industry standard for a Universal Charging Solution (UCS) for new mobile phones. Of course, the idea is a no-brainer and eminently sensible for all consumers and it's a shame that such slow progress is being made. As far as I know, [not even the common DC plug connector has been widely deployed yet.](#)

The second initiative I have been tracking – and am involved with – is the GSMA's Green Power for Mobile programme. The GSMA estimates that nearly 639,000 off-grid base stations will be rolled out across emerging markets by 2012 and is aiming for 118,000 of these to be powered with renewable energy.

And thirdly I have been tracking the progress of various low-cost handsets. Several manufacturers have attractive-looking, affordable products with excellent operating time.

However, none of these initiatives will solve the problem of how the hundreds of millions of people in areas such as rural Africa - where there is little or no electricity - can charge up their phones.

Indeed 25% of the world's population has no reliable access to electricity and 10% have no access to electricity. This is a huge market that needs to be addressed by the handset manufacturers.

In the meantime and thanks to solar chargers, the 1.6 billion people who have access to little or no electricity do have a reliable way to charge up their low-cost handsets. The investment needs for electricity grid are huge and to fulfill the need of power seems to be long catch up exercise. Today 60% of African population is enjoying cellular coverage and every new base station mean more need for off-grid demand to cellular subscribers.

At last year's AfricaCom the industry got excited at a couple of solar-powered phones on display from the likes of ZTE and Samsung. Beautiful and practical but with a major hurdle to widespread adoption in Africa: price and cost of ownership when you have to change the phone (and solar panel) every two to three years.

And it's not just price. Many industry observers talk about the willingness of people in rural Africa to share phones and swap in their SIM cards. However, this is not an ideal scenario. Far better is to have reliable and affordable phones and a solar charger which can be shared amongst many people.

In my mind, solar-powered chargers are the most practical way to power up a phone in Africa. A simple device which is easy to use and can be shared amongst friends and neighbours. As well as phones, sun-charging small solar panels can serve to provide extra operating time for portable FM radios and small-scale LED lighting systems.

The cost and efficiency of photovoltaic panels is improving. The new, innovative solar harvesting solutions will enable increasing numbers of portable and household electronic appliances to be solar-charged including laptops, TVs, water purification and heating, fans and coolers.

Solar harvesting will also play an important role in hybrid energy systems. Solar, combined with small scale hydro power plant, wind energy, wave energy etc. enables the use of renewable energy to become a viable option to easy to deploy but pollutive energy sources such as gasoline and diesel generators. The investment cost of renewable energy generation is declining rapidly through new innovation and economies of scale component manufacturing. The cost of maintenance is clearly in favour of renewable energy systems.

One part of the ecosystem that needs improving is the storage of energy in batteries. Vendors are investing in the development of more sophisticated battery products. Economical (affordable) energy storage is a challenge that needs to be solved in any off-grid energy systems.

Mr. Jouko Häyrynen is the CEO and co-founder of Suntrica which has developed a variety of solar-powered chargers for electronic devices. In Africa Suntrica's chargers are available in Namibia by <http://www.so4mo.com> and in Nigeria by <http://www.omac-solutions.com>. Suntrica will be exhibiting at AfricaCom, Pavilion P59, www.suntrica.com.