School energy storage madagascar

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The project << Solar Electrification of fifteen schools in rural areas in Madagascar >> is the result of a partnership between UNESCO, the international firm PANASONIC and OPEP Foundation.

This project comes within the framework of the International Foundation for Development. It aims at promoting Education by electrifying schools that were not connected to the local power grid. Photovoltaic modules were used as a mean to supply renewable energy for schools to be energy self-sufficient. Computers and modems were also provided and installed in each school in order to provide the pupils and teachers with an internet access.

A new partnership aims to deliver solar-powered computers to 10,000 children a year across schools in Madagascar and East Africa. The computers will go to schools that do not have access to reliable power, helping to reduce a gulf in digital literacy arising from a lack of energy access.

The International Finance Corporation (IFC) estimates that 230 million jobs across Africa will require some level of digital literacy by 2030, translating to 650 million training opportunities and a $130 billion market. And yet across Sub-Saharan Africa, only 35% of schools have access to electricity, 89% of learners do not have access to household computers and 82% lack internet access. Globally, 230 million children attend primary schools without electricity, compromising educations and development outcomes.

The Jirodesk 2, designed and produced in Madagascar, will support and enrich learning, as well as equip younger generations with the vital digital skills to build the continent"s digital economic future.

Yann Kasay, CEO of Jirogasy and the French Africa Foundation"s Young Leader of the Year 2019, said: "Every part of this project is championing economic growth in East Africa. The computers are built here in Madagascar, supporting the development of local digital and engineering jobs. The batteries are enabling the growth of a skilled green jobs economy in Kenya. Together, they are delivering key educational resources to Malagasy schoolchildren, boosting digital literacy and offering a route for largely non-electrified communities to connect to new economic opportunities."

Expanding digital learning in previously unconnected communities will open up huge opportunities. As COVID-19 forces more businesses and schools online, the World Economic Forum highlights that is more important than ever that transferable digital skills are incorporated into education curriculums.

The batteries that power the Jirodesk 2 are built in Kenya from repurposed waste solar lanterns and lithium-ion battery cells. UK-based Aceleron works with local technicians in Nairobi to develop and build the high quality, second-life batteries, creating a local workforce of battery manufacturers and engineers, and empowering people with skilled jobs.

Jirogasy has selected Aceleron as its delivery partner because of the African-built credentials of its batteries, and the shared mission to advance green economic growth in East Africa.

"These computers can change lives. Circular economy batteries can be the cornerstone of localised circular economies - wherever the batteries are, they drive the growth of skilled green jobs. This project is evidence that clean technology is about so much more than reducing emissions, it"s about improving people"s lives."

Aceleron"s unique batteries are designed with the circular economy in mind. They can be taken apart, serviced and upgraded, so if one component breaks, the individual piece can be easily replaced. Most other batteries are welded or glued together, meaning that they would normally have to be thrown away when a component breaks. As the computers will be operational in often difficult to reach schools, the ability for all components to be easily accessed and fixed at the schools will embed the systems with additional resilience.

The pilot stage of this project will see seven schools equipped with computers across Madagascar in 2021, with a further 20 in 2022. Long-term, Jirogasy is aiming to provide access to the Jirodesk 2 to 10,000 Madagascan students per year and to build an additional production site in Kenya, expanding the reach of this technology.