MESCH

UK project offers African rural hospital reliable power using innovative solar microgrid, battery energy storage and clean hydrogen

A groundbreaking new energy project integrating hydrogen with batteries is being developed in Malawi, southern Africa, serving rural hospital to provide clean, reliable electricity and clean hydrogen for cooking.

Called the **M**odular **E**nergy **S**torage with **C**lean **H**ydrogen (**MESCH**) project, it will develop and deploy the integrated solar microgrid, battery storage and hydrogen system, dubbed the 'battery electrolyser', in southern Malawi. The system is being developed and piloted at Mwanza District Hospital and aims to provide sustainable and dependable energy for developing countries.

The two-year project is being managed by the battery research group the Consortium for Battery Innovation, working with partners including Loughborough University, ULTIMA FORMA LTD, Monbat AD from Bulgaria, INFLO LTD and Renew'N'Able from Malawi and with funding from Innovate UK.

The innovative system works by combining electrical power from solar microgrid, storage (batteries), and the excess energy that produces hydrogen using battery electrolysis.

The innovative solution links to a microgrid in a closed-loop system, generating clean electricity and clean hydrogen and oxygen as a byproduct of the production process.

"We are extremely excited to be starting the MESCH project and working with our partners in the UK, Bulgaria, and Malawi. We believe the modular, containerised energy system is unique.

The technologies central tori MESCH—advanced lead batteries, hydrogen storage, and, of course, our novel hydrogen battery-electrolyser—are potential game changers. It will be incredible to learn about the energy and cooking needs of community hospitals in Malawi and how our solution can change lives."

Project Lead Dr. Carl Telford
R&I Director at CBI

The MESCH project brings together a formidable consortium of technical, business, and academic partners, including:

Loughborough University *(renowned for pioneering research in battery-electrolyser technology),* ***ULTIMA FORMA LTD*** *(specialising in manufacturing innovative energy solutions),* ***Renew'N'Able Malawi*** *(focused on sustainable energy initiatives in Malawi),* ***Monbat AD*** *(a leader in battery production and recycling),* ***INFLO LTD*** *(experts in business development and market integration)*