



BUILDING EDUCATION FOUNDATIONS THROUGH INNOVATION AND TECHNOLOGY

THROUGH BEFIT, SUN KING AND CONSORTIUM PARTNERS ROLL OUT SOLAR-POWERED EDTECH TO ALL PRIMARY SCHOOLS IN MALAWI

2023-2029

MALAWI

In Malawi, while the government has improved access to and equity in primary schools, 90% of children still cannot read and understand a simple text by age ten. Under the right conditions, technology can help improve educational outcomes. However, only one in every three Malawian schools has access to electricity. This figure drops to 10% for rural, remote Malawian schools.

Young learners in Malawi are confronted with significant educational hurdles, including a dearth of educational resources, insufficient numbers of trained teachers, and crowded classroom conditions. The Building Education Foundations through Innovation and Technology (BEFIT) programme targets the issue of poor educational outcomes amongst primary-school-aged children. The initiative seeks to enhance basic maths and reading skills through tablet-based educational technology (EdTech) interventions. Through a solar electrification partnership with Sun King, BEFIT plans to electrify Malawian schools to power EdTech solutions and boost education for 3.8 million children.

Led by Malawi's Ministry of Education and supported by international NGOs, such as [Imagine Worldwide](#), [VSO](#), and [onebillion](#), as well as local NGOs, BEFIT targets primary school children in grades 1 to 4 literacy and numeracy skill development through EdTech. The initiative is aligned with the national curriculum and complements the ongoing efforts of teachers across the country.

For EdTech to succeed, appropriate educational systems, resources, technological frameworks, and energy infrastructure are essential. Currently, only a fraction of schools in Malawi have access to electricity. Further, EdTech requires culturally, linguistically, and educationally relevant tech-delivered content.

In recent years, BEFIT's consortium partners have cultivated an evidence base focused on both pedagogical and EdTech issues, specifically tailored to Malawi's social, cultural, and educational landscape.

PROJECT TIMELINE :

Between 2013 and 2022, before the inception of BEFIT, [Randomised Controlled Trials \(RCTs\)](#) were conducted on onebillion's learning software in different countries, languages, and settings. These RCTs have consistently shown positive and significant learning gains in literacy and numeracy.



In 2023, Sun King installed 500 solar inverters in BEFIT schools.



Between 2024 and 2029, Sun King will install solar inverters in off-grid and weak-grid schools across the country.



By 2029, all primary schools in Malawi and all 3.8 million primary school students will be equipped with solar-powered tablets that deliver EdTech interventions.



Ministry of Education

BeFIT

 **sun king.**

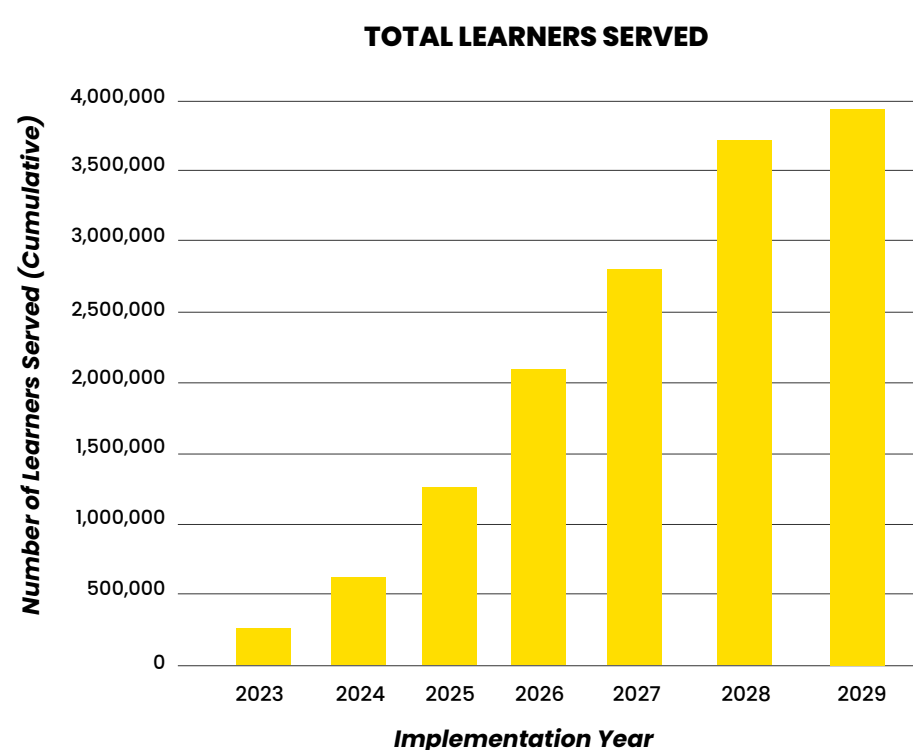
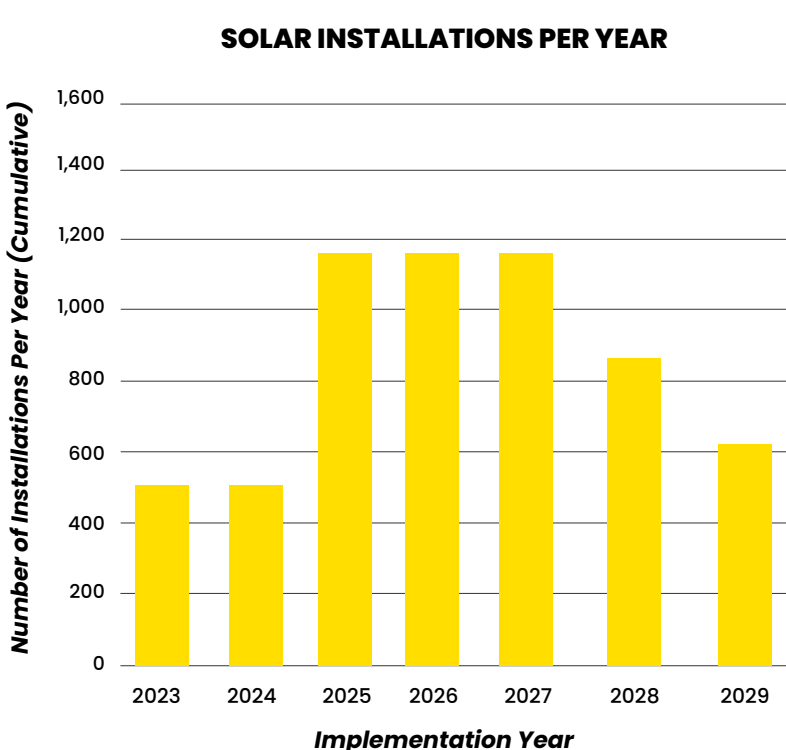


WHAT IS SUN KING'S ROLE?

Sun King plays a vital role in the BEFIT programme by supplying solar energy solutions to participating schools. These services power the educational tablets provided by BEFIT and, when feasible, for addressing the wider electricity requirements of the schools. Utilising its advanced PowerHub 3300 Inverter (see text box, right), Sun King has developed customised solar energy systems specifically for the needs of BEFIT schools. These systems, tailored to each school's unique power requirements, consist of a combination of inverters, batteries, solar panels, and charging stations. The components of these solar systems are containerised, ensuring both easy installation and secure and safe operation.

Beyond installation, Sun King supports BEFIT by offering maintenance, repair services, and system upgrades for their solar systems. This ensures the sustainability and cost-effectiveness of the solar energy infrastructure crucial to BEFIT's tech-based education approach. In Malawi, Sun King has a dedicated support team, including solar installers and call centre professionals, responsible for meeting the electricity needs of BEFIT-supported schools.

BEFIT'S INSTALLATION TIMELINE AND EDTECH IMPACT



REPLICATING SOLAR-POWERED EDTECH IN OTHER AFRICAN COUNTRIES

Malawi is among the first nations to scale a digital personalised learning solution countrywide. The initiative serves as a blueprint for other countries struggling with poor educational capacity and limited access to electricity. In 2024, Sun King is working with the NGO Imagine Worldwide to electrify schools in Liberia and Sierra Leone.

POWERHUB 3300's TECHNICAL SPECIFICATIONS

- 3300W AC power output provides grid-par power
- 4000W max solar power
- 5 kWh LFP battery storage
- Embedded cellular data (IoT) connectivity to the cloud, providing up-to-the-hour telemetry data for performance monitoring and fault detection
- Expandable 5000W systems will launch in late 2024
- 5 – 30kW AC power output covering high-income residential and a wide range of institutional opportunities
- Up to 30kW solar power

