

Powering Health Research

Blantyre Blantyre Research Facility, Malawi

DESCRIPTION OF THE PROJECT

Initially, this facility was built with a vision to become a state of the art, internationally accredited research facility and a resource mobilization tool. This health research facility consists of a **29.6 kWp** roof-mounted system with 80 tier 1 solar panels and a **45 kwh** Lithium-ion storage system. The self-sufficient system will supply interrupted power allowing the lab to run on a 24/7 basis.

REPORTABLE PROJECT IMPACT

- This will displace **67,020kg** of carbon dioxide in its first 5 months.
- Optimized to export at least **6,085.07kWh** of clean energy to the grid in the first 5 months of the project.
- **Skills development** through our e-learning program on renewable energy delivered to 78 Malawian citizens.
- The project resulted in an immersive competency-based training offered to 8 Malawians, 3 of which got **full-time employment**.

TECHNOLOGY USED

- **PV Modules** – 80 FuturaSun SRL 370W modules manufactured in Italy.
- **Inverters** - one 25 KW Sunny Tripower and three 8 KW Sunny Islands Germany manufactured units.
- **Smart meters, control units, and data loggers** by SMA.
- **Mounting structure** - K2 from Germany
- **Storage** – BYD 45 kwh Lithium-ion Battery.



2021/2022/2023/2024 PROJECTS SUMMARY

REPORTABLE PROJECTS IMPACT

Impact of Reportable Projects since 2021

Since 2021, we have accomplished significant achievements in our projects, resulting in substantial positive impacts:

System Installations:

- During this period, we successfully installed solar PV systems with a combined capacity of 9.4 MWp.

Carbon Dioxide Emissions Reduction:

- This collective effort is estimated to displace 15,060 tons of carbon dioxide annually, contributing significantly to environmental preservation.

Energy Cost Savings:

- The projected savings from our initiatives amount to approximately \$2,740,960 per year, based on current large business tariff rates, resulting in a reduced reliance on imported energy.

Clean Energy Export and Grid Integration:

- Our systems are effectively replacing reliance on thermal energy by exporting clean energy to the grid, facilitating a shift towards more sustainable energy sources.

Inclusion in BPC/Power Africa Rooftop Solar Program:

- All of our projects undertaken since 2021 have all been accepted into the BPC/Power Africa Rooftop Solar program, highlighting the credibility and quality of our work.

Empowerment and Diversity:

- Our projects have not only driven technical advancements but also created employment opportunities, especially for Botswana youth. Over 50 percent of these opportunities have been extended to women, demonstrating our commitment to gender inclusivity.

University Collaboration and Education:

- We hosted six industrial placements from the University of Botswana, with 75% of these placements being women, fostering knowledge exchange and skill development.

Research & Development Support:

- Our Research & Development (R&D) initiatives are actively supporting five full-time MSc (Master of Sciences) students at BIUST, promoting academic growth and practical learning.

Innovative Apprenticeship Programs:

- Pioneering innovation, we initiated the first solar apprenticeship program in Botswana in 2021, and further extended this program to Malawi and Zambia, qualifying Thirty-six young individuals in the process.

Empowerment through Community Initiatives:

- We played a pivotal role in establishing Botswana's first Community Distributed Energy Service company (DESCO), facilitating localized energy solutions.

Economic Opportunities for Citizens:

- Our R&D program has led to licensing, employment, and manufacturing opportunities for the citizens of Botswana, contributing to economic growth and self-reliance.

These accomplishments underscore our dedication to sustainable energy solutions, community empowerment, and impactful collaborations. We are committed to continually driving positive change and innovation in the energy sector.

