

Lighting the way for Kokoda College's sustainable future in Papua New Guinea

📍 Kokoda, Papua New Guinea

📅 May 2024 to May 2025



	DFAT	Partners	TOTAL
FUNDING	\$275,000	\$178,820	\$453,820

Overview

Kokoda Track Foundation (KTF) and the Australian Government, through the Business Partnerships Platform (BPP), partnered to deliver a first-of-its-kind solar mini-grid at Kokoda College in Papua New Guinea. The project demonstrates how off-grid renewable energy can unlock inclusive education, improve health and safety and strengthen climate-resilient community infrastructure in one of Papua New Guinea's most remote regions.

Located in Oro Province, Kokoda College operates in a highly remote and climate-exposed context where unreliable electricity limited teaching, digital access, safety and essential services. These challenges disproportionately affected women and students with disabilities.

The installation of reliable, campus-wide solar power has transformed daily life and learning. Students can now study at night, charge devices consistently and move safely around campus, while access to clean water has improved health outcomes and reduced daily burdens. For many students and staff, this is the first time they have experienced reliable electricity, enabling more consistent learning, greater participation and improved wellbeing across the college community.

Highlights

- **308** people are now benefiting from clean, reliable energy, including **193** students (51% women, 23 students with disabilities) and **109** staff - many accessing for the first time
- **24/7** clean power across the campus, replacing limited and weather-dependent supply
- Approximately **500** litres of diesel displaced annually
- Measurable improvements in learning outcomes, safety, health and inclusion.

Delivery snapshot

- 36 kW solar mini-grid with battery storage enabling campus-wide electrification across classrooms, dormitories and staff housing
- IT lab established with assistive technologies
- Solar-powered water bore, pump and filtration system installed
- Disability-accessible ablution block and upgraded pathways delivered
- Electric incinerator commissioned for improved waste management
- Seedling nursery established for food security and hands-on learning.

Impact

Improved access

Reliable electricity has transformed learning and daily life at Kokoda College.

- Consistent electricity now available across classrooms, dormitories, staff housing and shared facilities
- 24/7 access to lighting and device charging, replacing previously limited and weather-dependent supply
- Evening reading time increased by 47%
- Homework time increased by 21%
- 100% of students feel more supported to complete their studies
- 98% report improved ability to charge devices
- 97% now study using lighting at night.

Inclusive impact

Inclusion was embedded throughout design and delivery, ensuring equitable benefits for women, people with disabilities and other marginalised groups.

- Established an IT lab with 19 computers and assistive technologies, alongside disability inclusion training for staff
- Delivered accessible infrastructure upgrades, including a disability-accessible ablution block, 1200mm wide pathways and improved ramps
- Enjoyment of campus among students with disabilities increased from 55% to 100%, with 100% reporting reliable electricity every night
- Women's sense of safety increased from 51% to 90%, improving access to study spaces and facilities after dark
- Reliable access to clean water and improved waste management reduced water-related illness and strengthened campus hygiene.

Sustainability and scale

The Kokoda College solar mini-grid was designed as a sustainable pilot and scalable model for remote contexts.

- Campus staff, including the Solar Hub Manager and maintenance team, trained in operation and maintenance of the system
- Clear operations and maintenance protocols established, supported by warranties and remote technical support
- Funding provisions set aside for ongoing maintenance and future battery replacement
- Staff trained to manage complementary infrastructure, including the IT lab, water system, nursery and incinerator
- Model demonstrates a scalable, locally owned approach to sustaining reliable energy and integrated service delivery.

Notes from the field

Delivering in Kokoda's remote and logistically complex context required flexible planning and strong local coordination. Transporting materials and installing the system across difficult terrain presented ongoing challenges. To address this, the project prioritised local ownership and capacity building. Campus staff were trained to operate and maintain the system, supported by clear protocols and remote technical support.

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The solar mini-grid is a game-changer for Kokoda College. It provides much-needed energy to classrooms, enabling better learning outcomes and building pathways into higher education and employment, particularly in education and health.

Genevieve Nelson, Chief Executive Officer, Kokoda Track Foundation

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I first thought the mini-grid would not help us a lot, but then I realised it helps us in many ways. We now have lights everywhere and power points to charge our phones at night for study. It is much easier for us to learn and live here.

Rita Seseri, Grade 12 student

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What's next

The Kokoda College pilot unlocked follow-on investment through REnew Pacific, demonstrating the catalytic role of BPP support.

Building on its success, the mini-grid model is being scaled to new sites in Papua New Guinea, including a health facility in Oro Province and a secondary school along the Kokoda Track.

About the Off-Grid Renewable Energy Partnerships

The Off-Grid Renewable Energy Partnerships are part of the Australian Government's Pacific Climate Infrastructure Financing Partnership (PCIFP), expanding the Australian Infrastructure Financing Facility for the Pacific's (AIFFP) climate investments to deliver renewable energy in remote and rural communities across the Pacific and Timor-Leste. They are pilots for [REnew Pacific](#), AIFFP's \$75 million investment to scale off-grid renewable energy across the region.

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