

Community-led hydro upgrade delivers reliable energy in Vavanga, Solomon Islands

📍 Vavanga, Western Province, Solomon Islands

📅 June 2024 to May 2026

PARTNERS



Australian Government

FUNDING

DFAT

Partners

TOTAL

\$250,000

\$165,287

\$415,287

Overview

Supported by the Australian Government through the Business Partnerships Platform (BPP) and delivered in partnership with Pelena Energy, this project delivered an upgraded community-owned micro-hydroelectric system in Vavanga, Western Province, Solomon Islands.

The Vavanga community has successfully managed a micro-hydroelectric system since 1993. However, the legacy wiring had a very low power capacity and only supported basic lighting for a small number of homes. It was unable to reach the whole village or support opportunities for local income generation and business entrepreneurship.

This was addressed by combining community-owned micro-hydro generation with a robust electrical reticulation system. The upgrades have strengthened local energy access, and enabled reliable, affordable electricity to 116 households and key community facilities. It is also supporting new income-generating opportunities, and building long-term climate resilience for the remote island community.

Highlights



- **116 households** and key community infrastructure, including schools, churches and meeting halls, have access to affordable, reliable electricity expanding essential services
- **47 streetlights** powered, improving safety after dark
- Energy access now supports productive uses, including freezer storage, ice production and copra drying, unlocking local economic opportunities
- Increased women's participation in managing and maintaining energy-linked infrastructure.

Delivery snapshot



- 8kW community-owned micro-hydropower energy system
- Strengthened reticulation system ensuring safe, higher-capacity electricity with significantly increased distribution to benefit the entire village
- Flexible tariff model (cash or coconuts) improves affordability and access for all households
- Strong community ownership, led by the long-standing Vavanga Hydro Committee with expanded roles.

Impact

Improved access

The upgrades delivered reliable, affordable electricity across Vavanga, replacing legacy wiring that previously supported only basic lighting for a limited number of homes.

- All 116 households connected to a safe, higher-capacity reticulation system
- 47 streetlights powered, improving safety and mobility after dark
- Schools, churches and meeting halls now reliably powered, expanding essential services
- Energy access supporting productive uses including freezer storage, ice production and copra drying, unlocking local economic opportunities
- Reduced reliance on legacy infrastructure through a strengthened, village-wide distribution system.

Inclusive impact

Reliable energy is strengthening inclusion and wellbeing, with community-led governance ensuring benefits reach all households.

- Flexible tariff model accepting cash or coconuts ensures access for low-income households
- Vavanga Hydro Committee leading governance, ensuring transparency and local ownership
- Women's Group expanding into operations and maintenance, increasing women's participation in energy management and local enterprise
- Reliable energy supporting food security, livelihoods and education in a remote island context
- Benefits extended to all households, including those previously excluded under old infrastructure.

Sustainability and scale

Rooted in over 30 years of community-managed energy, the project strengthens a proven local model with clear potential for replication

- Updated tariff structures support a financially viable model for ongoing maintenance and operations
- Local capacity embedded through governance structures, O&M training and video-based learning.
- Community-owned model with strong governance through the Vavanga Hydro Committee ensures long-term accountability
- Aligned with Australia's Pacific climate investment agenda, with future expansion opportunities under REnew Pacific.

Notes from the field

Community involvement was central to delivery from transporting equipment by boat to leading governance through established committees demonstrating the strength of locally driven infrastructure models in remote settings.

Looking ahead, the focus will shift to strengthening operations and maintenance systems, including training and development of practical tools for the Hydro Committee and Women's Group.

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... The natural energy of a flowing stream can be utilised for local agricultural value adding, streetlights, home lighting and power points, and income generation for sustainability. ... It is a model for other rural communities across the South Pacific.

Peter Lynch, Founder and Managing Director, Pelena Energy

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This upgrading of the system and establishment of [copra] dryer and freezer room are one big development for our community, and I would like to thank the community for all their efforts, Pelena Energy and the Australian Government for trusting this community. The future is looking very bright.

Roni Metu, Chairperson, Vavanga Hydro Committee

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Left: traditional wood-fired (smoked) copra. Right: 1st Grade copra from the new Pelena drying process implemented at Vavanga.

What's next

The project will now focus on strengthening local operations and maintenance through training, manuals and ongoing support from Pelena. The Vavanga Hydro Committee will continue to manage tariffs and system operations, building long-term community ownership.

Attention will also turn to expanding productive energy use and supporting small business opportunities, while capturing lessons from Vavanga to inform future scale-up of similar community-led renewable energy systems across Solomon Islands.

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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