BUSINESS PARTNERSHIPS PLATFORM

Australian Government

Australian Infrastructure Financing Facility for the Pacific

Strengthening solar repair skills and livelihoods in Vanuatu's remote communities

Tanna Island, Vanuatu

July 2024 to April 2026

PARTNERS

UNSW AUSTRALIA

Vanuatu Institute of Technology – Institut de Technologie de Vanuatu

Department of Energy

Australian Government

FUNDING

DFAT	Partners	TOTAL
$283,181	$285,053	$568,234

Overview

Delivered by the University of New South Wales (UNSW) in partnership with the Vanuatu Institute of Technology (VIT), the Department of Energy and the Australian Government through the Business Partnerships Platform (BPP), the 'Fixim Sola' project has focused on building local capacity to repair and maintain off-grid solar systems across remote communities.

Rather than installing new systems, the project has addressed a critical gap in energy access by focusing on solar maintenance, repair, and entrepreneurship, rather than new infrastructure.

With around 90% of households in Tafea and Penama provinces relying on solar, and an estimated 40% of systems falling into disrepair, strengthening repair services is essential to ensuring reliable, long-term energy access while reducing solar e-waste.

The project demonstrates how circular economy approaches to extend the life of existing technologies through repair, reuse and skills development can deliver both environmental and economic benefits.

Highlights

- **90,000+** people now have improved access to repair services
- **141** people trained in off-grid solar repair
- **110+** solar systems repaired and installation of at least **5** off-grid solar systems supported
- **418** solar products assessed
- **10** jobs created, with more cooperatives and small businesses emerging
- **45** women trained (**33%** of participants)
- Strong disability inclusion (**8%** of trainees)
- **95%** of surveyed households reported improved solar literacy
- Institutional strengthening of VIT and national training systems.

Delivery snapshot

- 2 open-access curricula designed; one for senior secondary students and one for technical vocational training
- 7 local repair initiatives established
- Vocational training programs delivered across Tafea and Penama provinces
- School-based programs delivered at Tafea College and Lini Memorial College
- Expanded from 3 to 8+ islands, significantly increasing geographic reach.

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Impact

Improved access

Improved reliability of lighting and appliance use across homes, schools, and community facilities.

- Repair-focused model restored functionality to existing solar systems used by ~90%+ of households in target provinces
- 30% of households reported having solar products repaired by local technicians
- Emerging repair networks improving access in remote islands (including spillover support across Area Councils).

Inclusive impact

Inclusive design and training significantly improved confidence and employability for women and marginalised groups.

- Women held leadership roles as project managers, trainers, and data collectors
- 45 women trained in solar repair
- Women made up 37% of school trainees and 31% of vocational trainees
- 88% of households reported improved energy security
- 8% of trainees reported disabilities
- Households with members with disabilities reported 93% improved solar knowledge and 87% improved energy security.

Sustainability and scale

Model identified as replicable across the Pacific.

- Training materials are open access and adaptable across the Pacific
- Establishment of community repair businesses and cooperatives (Tanna, West Tanna, Penama)
- Development of provincial repair hubs (e.g., Lenakel hub) with government support
- Strong pathway for institutionalisation through VIT expansion across provinces
- School programs are being embedded into curriculum and scaled nationally.

Notes from the field

Delivery was highly practical, with hands-on training proving more effective than theory and enabling immediate repairs, including students fixing multiple solar devices during school programs.

Despite major disruptions such as airline collapse, severe weather, and a volcanic eruption, the project adapted scheduling and still delivered all planned outcomes. Logistics and spare parts shortages limited repair volumes and led to underreporting of activity, particularly in remote areas with connectivity challenges. Field experience also showed strong early signs of employability, with some trainees already moving into paid solar technician roles

> The partnership between UNSW, the Department of Energy, and the Vanuatu Institute of Technology was strong and central to the project's success... each partner brought complementary expertise that ensured effective and impactful delivery.
>
> **Project team reflection**, (UNSW, VIT and DoE)

> The teachers and the students who participated in the Fixim Sola Project workshop have expressed great interest and satisfaction... which I believe has empowered them with the necessary skills to further assist in their respective communities.
>
> **Principal**, Tafea College

What's next

The project is moving into consolidation and scale through integration of training into VIT's Certificate IV Sustainable Energy program and wider rollout of school-based curricula across Vanuatu. Formal accreditation discussions are also underway with Vanuatu Qualifications Authority.

Community repair cooperatives and provincial hubs will continue to be strengthened, alongside deeper engagement with solar suppliers to formalise repair outsourcing and improve spare parts access. The model is also being prepared for expansion across other Pacific countries, supported by open-access materials, accreditation pathways, and emerging national systems for vocational training and repair networks.

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.

Find out more