

*Powering  
communities  
by  
supporting  
innovative  
clean energy  
solutions*

# **PAWARIM** KOMUNITI

Papua New Guinea Off-Grid Electrification Program



**PNGAus Partnership**

# ABOUT THE PROGRAM

**Pawarim Komuniti** – is a new Off-Grid Electrification Program funded by the PNG-Australia Partnership to support access to clean energy in rural and remote communities in Papua New Guinea (PNG). The program is part of Australia’s commitment under the PNG Electrification Partnership to help PNG meet the target of connecting 70% of the country to electricity by 2030.

Access to electricity is a key enabler for economic growth.

The PNG Government’s 2010-2030 Development Strategic Plan outlines increasing electricity supply and access as a key priority for people in remote towns and communities in the country.

Electrification rates in PNG are extremely low. Currently only an estimated 13% of PNG’s 8 million people have access to electricity.

With 80% of people in PNG living in remote towns and communities

with limited access to basic services, increasing access to electricity will help improve living standards and allow government services like schools and health centers to deliver reliable services.

Access to electricity is also important to foster growth in the private sector especially small and medium enterprises (SMEs).

Pawarim Komuniti has been developed as a grants program to incentivise innovative and inclusive projects in remote parts of PNG not served by the

national electricity grid, to support access to clean energy and improve communities’ wellbeing.

**The Program aims to:**

1. Provide rural households, community service facilities and businesses with reliable and affordable access to clean energy.
2. Support Government, development partners, civil society and private sector with information on successful sustainable off-grid electrification models.

**Supporting aim  
of connecting**



**70%**

**of the population  
to electricity  
by 2030**

## KEY OBJECTIVES

**1 ENERGY ACCESS**  
Deliver access to energy services that has a positive development impact on people and communities

**2 SUSTAINABILITY**  
Support sustainable off-grid projects ensuring local ownership and community participation

**3 VIABILITY**  
Provide technically and economically viable solutions with a focus on clean energy and climate change

**4 INCLUSIVITY**  
Ensure gender and social inclusion mainstreaming that addresses the needs of women and men, and with a focus on vulnerable groups

**5 INNOVATION**  
Innovate and pilot new models of delivery for technologies that are newly adapted for off-grid electrification in PNG



## WHAT IS OFF-GRID ELECTRIFICATION?

Off-grid electrification is fast becoming the preferred means to connect people to electricity in countries where communities are isolated, and the cost of grid connectivity is high.

Off-grid electrification refers to stand-alone power systems or mini-grids that provide households, businesses, public or community service facilities with power.



## WHERE DOES THE PROGRAM FOCUS?

Papua New Guinea currently has three large electricity grids operated by the vertically integrated state-owned utility, PNG Power Limited (PPL). PPL also owns and manages mini grids in most provincial centers and has exclusivity to a 10km radius around its existing grids.

In Pawarim Komuniti program, 'off-grid' refers to systems generating less than 1MW of power anywhere beyond the 10km PPL exclusivity zone, and it does not involve extending the existing national grids.



## WHY OFF-GRID IN PNG?

Research in the energy space highlights that for much of the PNG population, off-grid solutions will remain the most appropriate and cost-effective because of high cost of grid extension

With 80% of people in PNG living in remote towns and communities with limited access to vital services, increasing access to electricity will help improve living standards and allow government to deliver better services in schools and health centers.

Access to electricity is also important for fostering economic growth in the private sector especially small and medium enterprises (SMEs).

Currently, people and businesses in remote communities rely on lower forms of energy such as kerosene, biomass and on diesel generators. Poor maintenance, high costs of fuel and challenging logistics mean that run-down assets and long outages are common.

The emergence of new technologies is bringing a range of new pathways to electrification that are more reliable and cost-effective than conventional means, especially in rural settings.

## PROGRAM DELIVERY

The **Pawarim Komuniti** - PNG Off-Grid Electrification Program aims to achieve progress towards PNG Government's objective of connecting 70% of the population to electricity by stimulating private sector and non-government activity to offer affordable and clean energy access to people living in remote towns and communities.

The Pawarim Komuniti program will work with private companies, NGOs and associations, and Provincial and Local Level governments to deliver renewable energy services to remote communities in the country.

Pawarim Komuniti will fund a wide range of projects to implement innovative, cost effective models for distribution and delivery of off-grid electricity. Projects will need to demonstrate competitive and affordable connection costs.

Projects should be developed by partnership of multiple actors and preferably stimulate an ongoing market system.

The types of project funded will most likely include solar or hydro micro grids and also projects to distribute higher quality certified solar home systems through cost effective models.

The program will encourage the engagement and involvement of provincial authorities, districts and community groups to strengthen the selected partnerships and endorse ownership and long-term sustainability.

All projects are expected to meet minimum technical requirements and comply with all legal and regulatory requirements, such as the Environmental Act and the Lands Act.

For projects dealing with solar home systems, applicants will be advised of a minimum quality standard and size specifications.

The total size of the Program is approximately AUD 20 million (PGK46 million) over a period of four years (2019-2022). Individual grant amounts for projects will be determined on a case by case basis, expected to be within PGK 250,000 and PGK 3 million for a single grant.

Lead applicants must be registered companies or non-government organisations eligible to work in PNG and able to satisfy required due diligence (organisational and financial capacity) assessments. Strong applications will need to list partner organisations (affiliated entities).

## PROJECT SITES

**Pawarim Komuniti** will operate across PNG in remote rural locations where the national electricity grid operated by PNG Power Limited is unlikely to become a viable solution.

The program will also designate several sites for which it will seek proposals.

For the designated sites, the program will provide applicants with basic site descriptions (population, population

distribution, key amenities, economic activity, existing electrification etc.) targets and potentially partner organisations.

Applicants may choose to submit proposals for any other site.

## APPLICATION PROCESS

All applications will go through a two-stage process

**1** Submit an Expression of Interest (EOI)

**2** Submit a Full Proposal

Some **Indicative** criteria are as follows:

1. Value for money (cost per connection, leverage of other finance)
2. Alignment with the programs key objectives
3. Technical feasibility of project plans
4. Socio-economic feasibility of project plans
5. Track-record of the organisation(s)
6. Appropriateness of site selection (when not designated site)

## MONITORING, EVALUATION & LEARNING

The Monitoring and Evaluation (M&E) system will require gender disaggregated data to be collected and will also assess how women, youth and vulnerable groups in the communities are involved and benefitting.

Successful applicants will be assisted to develop project level performance frameworks that outline indicators and targets to be achieved by the project, and a plan that details how they intend to collect and report data.

The overall program M&E plan will incorporate indicators that aggregate project level monitoring data but will also track the assumptions underpinning the approach of the program and

include evaluative questions on effectiveness, efficiency and sustainability of projects and the program as a whole.

Lessons learned will be captured and incorporated into the program as projects start rolling out, through a scheduled and streamlined approach to reporting.





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