



**BUSINESS
PARTNERSHIPS
PLATFORM**

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Sola PayGo customer in Papua New Guinea © BPP/Sarah Wiles



**LEARNING
BRIEF**

February 2021

Commercial pathways to clean, green, and affordable energy

Insights from six inclusive business partnerships

With a view across six inclusive business models, the BPP takes stock of lessons to help inform investors, businesses, NGOs and governments interested in investing in and supporting the energy sector to create lasting environmental and social impact.

Partnering for impact

The Business Partnerships Platform (BPP) supports partnerships between the Australian Department of Foreign Affairs and Trade (DFAT) and inclusive businesses across the Asia Pacific region to create lasting social, economic, and environmental impact.

Australia is helping partners respond to and recover from the COVID-19 pandemic. As such, the work of the BPP and the role of inclusive businesses have never been more important. With BPP support, businesses are designing and adapting products and services that improve lives, create more inclusive and productive value chains, and expand inclusive business practices.

Across the Asia-Pacific, an estimated 420 million people lack access to electricity and nearly half the region's population still relies on polluting and unhealthy cooking fuels and technologies¹. Rural populations, in particular, women and children, are most significantly impacted by the lack of energy access. Reliable and affordable energy can improve lives by creating feelings of safety for women, allowing more time for children to study, unlocking economic opportunities and creating better health outcomes from reduced smoke from kerosene and biomass burning. This brief presents six partnerships that are addressing the energy access gap with bold and exciting ideas through cross-sector partnerships.

¹ UNESCAP (2017). *A Global Tracking Framework 2017 Regional Assessment Report*. United Nations: Thailand



Supporting affordable and clean energy solutions

Existing BPP partnerships are improving access to reliable energy, making solar products more accessible and reducing emissions. Under the first phase of the BPP, DFAT entered into six clean energy partnerships in four countries (Papua New Guinea, India, Kenya and Vanuatu). Four partnerships focus on enabling communities to purchase off-grid solar products to increase energy access, one innovative partnership is improving access to reliable, affordable and green energy and one partnership that is developing a new clean fuel appliance.

BPP energy partnerships have so far met or exceeded expected sales targets for clean energy products and services, demonstrating that there is significant unmet demand for clean energy products at the household level across several diverse market contexts.

The many benefits of clean, reliable and affordable energy



- More hours for study
- Improved business productivity
- Cost savings for fuels and mobile charging
- Improved feelings of safety
- More time for household activities
- Health benefits from reduced smoke from kerosene or biomass burning

Shining a light on women's safety

Solar lighting has many benefits beyond convenience. In communities that experience high levels of violence against women, access to solar lighting can improve women's safety. A BPP partnership in Papua New Guinea with DFAT, Australian social enterprise Sola PayGo, telecommunications company bmobile and off-grid solar product manufacturer d.light sold affordable solar products in remote villages in the PNG Highlands. In an impact study completed by the partners, the second most valued benefit of the unit, after education, was the security the lighting provided for homes. As Beverley from Enga highlighted:

"Since we had our Sola PayGo light, we sleep safe and enjoy the benefits of solar. I am so happy."



The DFAT BPP value add

The BPP has been able to add value in a range of ways to its clean energy partnerships, including:

❖ **Supporting businesses to access capital**

❖ **Supporting rigour in results measurement**

❖ **Improving gender and inclusion strategies**

❖ **Providing access to networks to unlock further opportunities**

How the BPP improves gender and inclusion strategies:

When the BPP works with partners we look at the different roles women and men play in the value chain as leaders, producers, consumers and suppliers. We work with our partners to conduct a gender analysis to understand the differences in women's and men's lives and how this contributes to inequality. Using the information from the analysis, businesses can then make informed decisions to strengthen not only women's role within the business and its suppliers but strengthen the business itself.

The BPP's clean energy partnerships:

Clean energy product innovation in Kenya

Start: June 2019 - End: June 2022



A partnership with KOKO Networks, a clean technology company, to accelerate the development of a new, scalable and replicable clean energy appliance for households and small businesses in East Africa and beyond, further reducing demand for deforestation-based charcoal fuel. The new solution(s) will enable safer, more affordable access to clean energy, and drive major environmental benefits as customers transition away from dirty fuels. Women are disproportionately impacted using dirty fuels in the home and in SMEs, and are the primary beneficiaries of the initiative.



Private sector investment
\$1,012,075



DFAT investment
\$499,601



Partnership type
Clean fuel appliance

Empowering women to sell solar energy in India's unelectrified communities

Start: November 2018 - End: November 2020



A partnership to increase the rate of sales of eco-friendly energy products into rural areas, and to recruit more women into Pollinate Group's sales network and provide them with capacity strengthening support to enable them to develop their businesses and provide for their families. The solar products mechanise household tasks saving women time, reducing the use of dirty fuels in the home and providing income and leadership opportunities for the women who sell the products.



Private sector investment
\$668,900



DFAT investment
\$537,040



Beneficiaries with increased income
**17,182
(8742 women)**



Jobs created
**293
(all women)**



Partnership type
Off-grid solar product

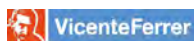


After I took up that job, my family never had to go through hardship for daily meals. I am able to provide a good education to my two sons, one of my sons is pursuing a bachelor's in computer application. My husband is very supportive and helps me in the household chore. I started my job to sell products and now I help others to sell products. I share the workspace with my mentors and senior managers at the office. I feel proud.

Amreen, Field Supervisor, Pollinate Group

Improving access to reliable electricity at the edge of the grid in India

Start: October 2018 - End: June 2020



A partnership to help grid operators improve access to reliable, affordable and green energy in communities at the edge of the grid in Andhra Pradesh, India and to create an economic and social model that delivers significant community development benefits that can be replicated elsewhere. Consistent and affordable energy has far-reaching benefits including, creating opportunities for sustainable local businesses, more time to study and a safer environment for women



Private sector investment
\$900,000



DFAT investment
\$500,000



Beneficiaries with increased income
591 (295 women)



Net attributable income change
**\$9,427
(5,377 for women)**



Partnership type
Improved grid management

Affordable solar solutions in Papua New Guinea

Start: April 2019 - End: April 2020



This partnership scaled-up solar energy company, Sola PayGo's existing business model, providing high-quality solar power units to 2,500 rural and remote households on a pay-as-you-go basis to people who currently have no access to grid electricity. An impact study from the Sola PayGo showed the top benefits for consumers were more time for study, improved health, feeling of safety, small business growth, more social time and time for household activities.



Private sector investment
\$455,700



DFAT investment
\$199,323



Beneficiaries with increased income
867 (366 women)



Jobs created
41 (27 for women)



Partnership type
Off-grid solar product



I live in a remote part of Wabag District, in Enga Province and there's no power in my area. Since purchasing my solar lights I am making more money out of my three small scale businesses: a poultry business, trade store and snooker table. My children now sit around the table [in the evenings] to study and I have seen an improvement in their marks too.

Tumu, small business owner in Papua New Guinea.

Improving productivity with solar agricultural mills in Vanuatu

Start: November 2017 - End: June 2019



This partnership provided access to solar energy solutions for poor and remote off-grid households in Vanuatu, enabling them to shift from uneconomical and unsustainable fuels (kerosene, diesel and wood) to modern, efficient, renewable local energy sources. In doing so, it contributed to women's empowerment through reduced work care burden and increased household income.



Private sector investment
\$1,132,413



DFAT investment
\$500,000



Beneficiaries with increased income
2,500 (1,250 women)



Partnership type
Off-grid solar product

Connecting communities to clean energy and the digital economy in Papua New Guinea

Start: November 2016 - End: June 2018



This partnership provided access to affordable and reliable solar energy solutions to off-grid households and small businesses in Papua New Guinea and, in doing so, brought better access to and connection with the digital economy for Digicel customers.



Private sector investment
\$1,106,489



DFAT investment
\$500,000



Beneficiaries with increased income
20,000 (10,000 women)



Net attributable income change
\$2,850,000



Partnership type
Off-grid solar product

Business insights and learnings

Lessons from the BPP portfolio indicate that working in the clean energy sector is a tangible and practical way of achieving environmental, social and commercial outcomes.



Matching the right solution to the right context is critical.

WHY?

An understanding of the market and the needs of the consumer are critical for good product design. In India, Australian energy company, Village Energy piloted a new technology platform to bring reliable energy to an area where grid infrastructure exists. Village Energy had worked with micro-grids in Western Australia and together with NGO, The Rural Development Trust, was able to localise the model to India. As household level systems continue to improve there are likely to be areas where, due to isolation or population, grid expansion proves unviable and unnecessary. Business knowledge of this context is important when making investment decisions.



A gender analysis can create opportunities for women and value for the business.

WHY?

A gender analysis helps a business to identify the different roles women and men play and where inequalities exist. Equipped with this information a business can adjust and improve operations, services, or products to strengthen the business and promote equality. Pollinate Group in India has developed an all-female entrepreneur sales network to distribute clean energy products in informal communities in urban India, investing heavily in their training and development. Pollinate sells solar household products and its customers are mostly women. The women sales network strengthens the business model and provides opportunities for women.



Leverage and improve existing networks and infrastructure.

WHY?

Leveraging and improving existing networks and infrastructure helps to keep the costs of last mile distribution down. For example, in its core cooking fuel business, KOKO Networks in Kenya leveraged existing liquid fuels distribution networks, driving increased safety and cost efficiencies that make its renewable clean cooking fuel solution significantly cheaper than deforestation-based charcoal.



Making repayments easier for pay as you go products is essential.

WHY?

Customers in remote rural areas, where reliable solar products are often most needed, can be hard and expensive to reach. Sola PayGo in Papua New Guinea managed to facilitate simple payments and ongoing troubleshooting for rural customers without a permanent presence. By leveraging the existing mobile credit distribution and USSD telecommunications network of Bmobile, the percentage of repayments was higher.



A solar lamp does not equal an electrified household.

WHY?

Impact surveys in Papua New Guinea and Vanuatu demonstrated that customers preferred quality, long-lasting household level solar systems with multiple lights, chargers and radios when compared with simpler lamp and mobile charger products. Customers reported using cheaper solar products in the past that had been costly and broke easily.

Common Challenges faced by BPP Partners

As the BPP looks to help partners scale up, some key challenges remain. These include:

- managing working capital,
- access to finance,
- managing defaults on repayments
- costs of distribution
- training and retaining a consistent salesforce.

A household solar customer on Pele Island, Vanuatu © BPP/Corinne Roberts



Results



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Clean energy
partnerships in
four countries

220,000



People reached
(50% of these women)



3.3 million

In increased cost
savings and income

4.1 million



Leveraged in private
sector and partner
investment



We have lowered consumer bills by **9%**,
reduced peak load by **13%**,
decreased outages by **75%** and
saved the distributor **30%** per kWh supplied.

Yvonne Power,
Co-Founder Village Energy



A market opportunity with social benefit

Despite the challenges, the BPP's partnerships have demonstrated a clear market opportunity for delivering improved access to clean energy products in the Indo-Pacific. There is potential to unlock environmentally friendly economic growth and a range of other social impacts for customers in both rural and urban settings. While COVID-19 brings challenges with implementation, it also creates an opportunity for business, governments and investors to re-focus investments on supporting a green recovery for the benefit of the rural and urban poor in the region.

Find out more or contact us:

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The Business Partnerships Platform is supported by the
Australian Government and Implemented by Palladium.



Australian Government
Department of Foreign Affairs and Trade