



Light for Life

Empowering local communities with sustainable energy solutions

Funded by:



Political Partner:



Coordinated and Implemented by:



EnDev - Sustainable access to modern energy services

Since 2005, the Energising Development (EnDev) partnership has been promoting access to affordable and environmentally sustainable energy in Africa, Asia, and Latin America. Working in close cooperation with government and other development partners, EnDev applies a bottom-up approach to translate national policies and local requirements into practical solutions that are reliable, affordable and appreciated by all.

EnDev's services include project identification and design, as well as monitoring, financial assistance and facilitating access to other international energy programmes. Typical solutions involve installing community micro hydro and solar power systems, and distributing domestic pico solar systems and clean cookstoves. By pioneering innovative approaches, developing new markets, and scaling up successful interventions, EnDev contributes to positive economic, social and environmental outcomes globally. Currently, EnDev is active in 25 countries, and 59 percent of funds are targeted at least developed countries.





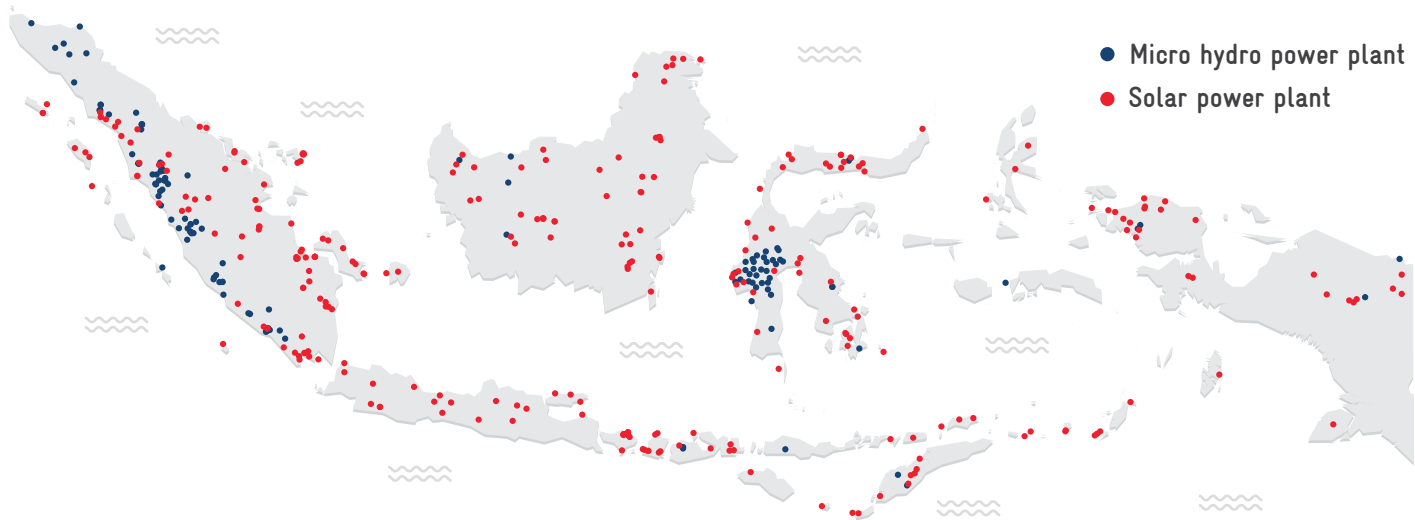
EnDev Indonesia

In Indonesia, EnDev has been supporting the government's rural electrification efforts since 2009. With partners that include the Directorate General for New and Renewable Energy and Energy Conservation (EBTKE) at the Ministry of Energy and Mineral Resources (ESDM), EnDev Indonesia is working to fulfil government commitments to increase the national electrification ratio to 96 percent by 2019, and to provide 23 percent of national requirements from renewable energy sources by 2025.

Currently, 12 percent of the population lack access to electricity, and the country is heavily dependent on fossil fuels. To date, EnDev Indonesia has provided capacity development, technical assessment and monitoring, and knowledge management services that have helped create 309 micro hydro and 305 solar power systems that range in capacity from 5 kilowatt (kW) to 400 kW. These community operated and administered systems provide sustainable electricity to over 189,000 people, 1,500 public facilities - such as schools and health centres - and 2,700 rural businesses.



EnDev Indonesia supports access to electricity for:



Changing Lives

A community micro hydro power system has changed the lives of everyone living in a remote village in West Pasaman district – West Sumatra.

Inang is sitting on the veranda of her house, dangling her seven-month old child on her knee. She and her two neighbours, old school friends aged 23, are discussing how life has changed in their village, a strip of a hundred or so houses following a rough road leading up the slopes of Mount Talamau, 180 km north of Padang. Maize kernels dry on orange tarpaulins to one side of the house. The rural calm is occasionally shattered by the harsh crackle of a motorcycle carting oil palm fruit down the hill.



“

The school has a computer and a printer now. People can use the mosque at night. It's easier for children to study

”

– Joni Satria, Teacher



“For me, the most important thing is that now when my child cries at night, I can just flick the light switch on and see what the matter is. If it wasn't for the turbine, I'd have to find a torch, or light the lamp like my mother used to do.”

– Inang, Housewife



“Four hundred and fifty watts for each house is not much, but it’s enough to make a big difference.”
– Abu Bakar, Entrepreneur

It Makes a Difference

The 20 kW micro hydro power system, operated and managed by the community, is one of seven along the frothing Batang Batupangan river that runs parallel to the village, just 50 metres downhill. Operating day and night in a tin-roofed, concrete-floored shed set into the river bank, since 2008 it has been supplying electricity to 23 houses where around 125 people live, as well as to a 200-pupil Junior high school, a couple of small cafe-kiosks, and a woodworking business that employs three people making furniture and door and window frames. Each household pays just Rp 50,000 a month for 2 amps of electricity at a standard 220 volts.



Abu Bakar, the community coordinator who was trained by ESDM in 2009, says: ‘Four hundred and fifty watts for each house is not much, but it’s enough to make a big difference. The important thing to realise is that electricity is not just about televisions, fridges and karaoke systems. The turbine means we can weld in the village now and repair the motorcycles we need for work. We can pump water too. And when the recent earthquake struck, there was much less panic because everyone had good information.’ He praises the reliability of the turbine, and is proud of the way the villagers worked together to build the turbine shed, and the concrete forebay that provides the turbine with a steady stream of water. ‘We just need to make sure there’s no rubbish stuck on the water intake, and grease the bearings every month. That’s it!’



The Moving Force

This significant change of life in a relatively remote and poor community is the result of a remarkable collaboration, facilitated by EnDev Indonesia, which brought together the community, the Ministry and Prowater Multiteknik, a social enterprise located on the outskirts of Padang, which designed and built the turbine. The business employs 15 people in all, 10 in the workshop and five in the field, surveying possible sites and supervising installation.

Johny Ivan, 53, an electrical engineer trained at Bung Hatta University in Padang, is the moving force at Prowater.

Humming with energy, and wearing a sports shirt, he leans on one of the spray-painted turbine housings that sit in his grimy workshop like modern sculptures, talking loudly over the squeal of a lathe, the crackle of welding, and the odd bang of a hammer on metal. 'Since 2005 we have manufactured 130 turbines, and installed about a quarter of them in rural communities in West Sumatra. Many of these villages have taken advantage of our credit scheme which allows them to pay just Rp 2 million a month, rather than the full amount in advance, which would typically be around Rp 150 million.'





Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered Offices
Bonn and Eschborn

GIZ Office Indonesia
Menara BCA 46th Floor
Jl. M.H. Thamrin No. 1
Jakarta 10310, Indonesia

T +62 21 2358 7111
F +62 21 2358 7110
E giz-indonesien@giz.de
I www.giz.de/indonesia

www.facebook.com/GIZIndonesia
[@GIZIndonesia](https://twitter.com/GIZIndonesia)
Photos: GIZ/Jefri Tarigan
©GIZ, July 2017