

## Let there be light

*With assistance from the PNPM Rural Mandiri program, villagers in a remote district in Jambi, Sumatra, have harnessed the power of a river to create a sustainable and affordable supply of electricity*



Unlike the crowded island of Java, Indonesia's sparsely populated outer islands - Sumatra, Sulawesi, Kalimantan and Papua - are home to small communities spread out and separated by great distances. These distances create serious challenges regarding the development of road systems, power and water supply, as well as the provision of health services and education.

Because of these challenges, it is often prohibitively expensive for PLN, the state's electricity company, to provide electricity to isolated communities. Craft workers and home industries cannot use power tools to drive their enterprises without resorting to expensive, diesel fueled generators. Farmers are often forced to sell their produce under duress and at low prices as there are no means to store or process produce. Poor householders must either limit their activities to daylight hours or spend a significant proportion of their income on kerosene for lamps. Schools cannot light class rooms or operate computers or other equipment and health workers cannot safely store vaccines. It is hardly surprising, that one of the top priorities of remote communities is to develop a steady, reliable and affordable power supply.

Abdul Aziz is the head of a community-elected team in the village of Peradun Temeras in the Jambi province, Sumatra. His team's task is to devise and implement a micro hydro electric power generation system. Abdul is a respected member of the community, who makes a modest living as a farmer and carpenter.

"The village consists of 130 families. Most of the people here are farmers, growing rubber or coconut for sale in Bangko, the nearest major town. By road, in the dry season, it takes about four hours to reach Bangko. Before the Rural PNPM Mandiri project, the only electricity in Peradun Temeras came from generators. Only a handful of the richest households could afford a generator. A television was a luxury—beyond the reach of practically everyone. Just to light a small house with kerosene lamps cost rupiah 450,000 per month, about a half of the basic wage in the district. Poor families had to live in the dark," Abdul says.

When communities in the subdistrict were invited to submit a proposal for funds under the PNPM Rural program, the villagers in Peradun Temeras were unanimous in their decision. The top priority was to secure a supply of electricity.



“The vegetation here is thick and the rainy seasons are long. Solar power was too unreliable. However, we do have a plentiful supply of river water; we believed we could harness river water to create power.”

Under the program, a community is usually required to utilise their own resources. This includes building materials, labour and existing facilities. The program then provides additional funds to secure equipment, materials or other resources required.

The project required a massive effort on behalf of all community members. To build the 250 metre causeway, groups of local women carried 580 cubic meters of rock and men worked together to dig a wide trench in the clay ground.

“We set up 21 small working groups, each group responsible for an eleven meter stretch. That way, the whole village could monitor and assess the each group’s work. No one was paid for their labour, we all knew the reward would come when the village had electricity,” Abdul Aziz explains.

The generator now supplies electricity to all 130 families in the village. The generator has a total capacity of 50,000 MW.

“That is enough for power from 3 pm to 7 am every day. We’ve only had blackouts twice this year. Each family pays rupiah 500 per watt, which is less than city dwellers. To light a small house, it now costs less than rupiah 40,000 per month. Children can study at night. Women can use electrical tools to make coconut milk. The school now has a computer. As a carpenter, I’ve purchased power tools to make door frames and other timber products. My income has gone up significantly.”

“I was never paid a single rupiah for the work I did and neither was anyone else. But the entire community has benefitted. We did it through our own hard work, but it wouldn’t have been possible without the funds from PNPM,” Abdul Aziz says.

*Through AUSAID, the Australian government works with the Indonesian government to alleviate poverty and reduce unemployment across Indonesia. AusAID is has committed up to \$215 million to support the Government of Indonesia’s National Community Empowerment Program (known as PNPM) until 2014. PNPM operates in more than 70,000 villages across the country reaching approximately 35 million of Indonesia’s poor. PNPM Rural is a national Government of Indonesia program empowering rural communities. The program works by providing block grants to develop public facilities such as roads, bridges, irrigation systems, clean water supply units, schools and health units. Block grants also improve the human resources associated with these facilities. Projects are designed, managed and implemented through a participatory process involving all members of the community. This ensures development funds are effectively deployed to fulfill the aspirations of individual communities.*

