



## Success Story

### EnDev Nepal

Energising Development Partnership - EnDev

Energising Development (EnDev) is an energy access partnership currently financed by seven countries: the Netherlands, Germany, Norway, Australia, United Kingdom, Switzerland and Sweden. EnDev promotes sustainable access to modern energy services that meet the needs of the poor - long lasting, affordable, and appreciated by users.

The EnDev programme in Nepal is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) since 2009 to facilitate access to modern energy services through grid and off grid technologies. GIZ implemented EnDev supports the Community Rural Electrification Programme (CREP) of the Nepal Electricity Authority (NEA), associated to the Ministry of Energy, for grid extension to communities. For off grid technologies, EnDev supports Micro Hydro Debt Fund (MHDF), administered by Alternative Energy Promotion Center (APEC). In addition, Improved Water Mills Electrification (IWM-E) is implemented by SNV to support up to 5kW systems in rural villages.

EnDev also supports communities to engage in productive use (PU) promotion of grid electricity, in order to enhance their sustainability. It is conducted in cooperation with Helvetas Swiss Intercooperation and the National Association of Community Electricity Users Nepal (NACEUN). Lastly, an RBF facility on hood stoves is implemented by Practical Action Nepal and supported under the implementation infrastructure of the EnDev core activities.

After the earthquake, EnDev responded quickly to support Micro Hydro Projects supported under MHDF in coordination with APEC and communities. These experiences of EnDev Nepal have brought visible impacts in the field. Two examples are presented below: a Story from Salang VDC in Dhading and impacts of micro hydro power plants in rural lives.

### Story from Salang VDC

Salang village is just 80 km away from the capital Kathmandu and is one of the adjoining districts in the southern side of the capital city. Despite its proximity to the capital, it was just a couple of years ago that people got electricity access. The community rural electrification program (CREP) was an option for them as they were able to get a partial government subsidy for the grid to be extended and reach their households. Under the programme, due to the village member's inability to bring cash against community contribution, a revolving fund at utility NEA was established with support from EnDev project. The fund helped to bridge their financial gap and facilitated electricity access to 522 people in the Salang village. Currently, with the established fund, 55 rural communities received a loan at a nominal service charge which enabled 200,602 people with access to electricity and 2,930 SMEs.

After five years since the grid reached their area, a study showed that there is a close connection between electricity situation and socioeconomic development in rural communities like Salang of Nepal.

A recent study showed that despite that lighting is main use, 96% of Salang families use electricity for information and communication purpose and quality of life has improved in 55% of total surveyed families. Also, 81% of them believed that electricity contributed to better education conditions for their kids. 90% of people believed that access to electricity contributed to the development of small and micro enterprises like poultry farms, hulling and grinding mills, chilling centers, saw mills and carpentries. Electricity replaced diesel engine used in rice mill and reduced per hour operation cost by around 0.3 USD on an average as well as a 10% reduction in service fees for customers.

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Farmers from Salang who grow vegetables put light bulbs in their vegetable farms so pests get collected near the bulbs and they use pesticides to kill them. For this, they use less pesticides compared to if they had to use it in the whole farm. And, at the same time, vegetables are pesticide free.

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## Micro Hydro transforms rural lives in Nepal

Mr. Purna Bahadur Rai from Jalpa VDC, Khotang district now enjoys electricity generated from the Lumju Khola Micro Hydro Project. He, as father and a farmer, is also the chairman of the user committee managing this plant.

Just three years back, Mr. Purna and other villagers depended on kerosene and firewood for lighting purposes. He had to walk six hours to the nearest city of Diktel to buy kerosene for his home and had to spend NPR 95 per liter of fuel (EUR 0.85 per liter). One liter of kerosene only lasted for about a week. Now he pays around NPR 100 per month (EUR 0.88 per month) for the electricity service; saving NPR 300 (EUR 2.66) a month. "...It was very difficult, especially for women and children because they had to spend long hours in the dark and smoky environment, which had adverse effect to their health... we no longer have to stay in smoky homes, thus stay healthy..." says Mr. Purna. "Also, we use less firewood now and this is helping to save our forest..." he adds, while showing the LED light he installed in his house.

The access to electricity enabled the community to have a Computer Institute at school, so teachers and children use it for developing their learning horizons. "...with the increasing use of mobile phones and television people have gained access to information...as a hidden benefit of electricity utilising these modern facilities villagers are much aware and empowered." adds Mr. Purna. Women formed Aama Samuha (Mother Groups) and conduct women literary classes. They also encourage others to engage in income generating as well as social activities.

Currently the site has 195 families benefiting from a strong management committee. The management of the site is based on an adaptation of the tariff collection system managed in NEA. The committee has established proper tariff rates based on fixed based

tariff and per unit consumption. With a proper billing system, and a record book of individual households, the management has built trust among the villagers. The tariff collection is done through a local financial cooperative; and to encourage early payers, the community awards households with a pay back on their bill. Villagers are aware of the need of operation and maintenance of their power plant. For this purpose, they created a separate maintenance and repair fund which proved to be very crucial after the damages suffered by earthquakes in April 2015 and May 2015 and numerous landslides triggered during the monsoon season. Despite substantial damage to the plant, villagers came together to rehabilitate the plant with their available resources. This site proves that with a real and strong commitment of local villagers, the MHP development is not only feasible but sustainably successful.

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*Mr. Purna showing the LED light installed in his house powered by electricity generated by Micro Hydro power plant.*

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