Electriciens sans frontières
l'énergie du développement

WHEN ENERGY AND WATER GO TOGETHER
to reduce poverty in developping countries

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water source[2]

1. International Energy Agency, *World Energy Outlook*, 2013
2. WHO/UNICEF *Progress on Sanitation and Drinking-Water*, 2012 Update



Public fountain, Kenya

Who is Electricians without borders ?

A French NGO carrying out electricity and water access projects in developping countries. We consider access to modern energy services and safe water to be an essential condition to end poverty.

Since 1986, we act in favour of populations isolated from the main electricity grids and who suffer from energy poverty.

But most of all, we act with them, taking their needs into careful consideration and working with them to find the most affordable, efficient and sustainable energy and water solution.

WATER : STILL A LUXURY FOR 780 MILLION PEOPLE...

Today, 780 million people, approximately one out of nine, lack access to an improved water source[1].

That means more risk to die from water, sanitation and hygiene-related causes. In developing countries, children still die from diarrhea largely due to the lower levels of access to safe drinking water and sanitation, along with poorer overall health, hygiene, and nutritional status.

Yet, simple solutions exist to improve the quality of water and to facilitate its availability.

...JUST LIKE ENERGY FOR 1,2 BILLION PEOPLE

According to the International Energy Agency, 1.2 billion people do not have access to electricity, which is close to 1/5th of the global population[2]. The largest lack of access issue is located in the Sub- Saharan region where the rate of electrification is only 31%. And 80% of this affected population lives in rural areas.

Twice as many people - more than 2.6 billion - rely on traditional biomass energies for cooking or heating. The use of candles, wood or petrol lamps, can cause respiratory diseases, they also represent a significant cost for the households and, last but not least, they are an important source of pollution for the environment.

WHEN ELECTRICITY AND WATER ACCESS GO TOGETHER TO REDUCE POVERTY

Electricity access and water access both face 3 major challenges:
- **Meeting the rising demand** for water and energy, pushed by demographic growth,
- **Reducing climate change** and **protecting natural resources**,
- **Reducing poverty** and **improving living conditions of the poorest**.

Together, water and energy provide solutions to achieve the Millennium Development Goals established by the United Nations to reduce poverty:

> ERADICATE EXTREME POVERTY AND HUNGER

Building an irrigation channel for crops contributes to increasing the yield of fruits and vegetables that will be used to feed the community and sold at local markets.

A solar well guarantees safe water, whatever the weather conditions. Connected to an irrigation channel and fields, it ensures food for the community even during the dry season.

> ACHIEVE UNIVERSAL PRIMARY EDUCATION AND EMPOWER WOMEN

Connecting a solar pump to a well eases women's water burden. Women therefore have spare time to develop handicraft or farming activities and attend reading and writing courses at night, when the school is provided with electricity.

> REDUCE CHILD MORTALITY AND IMPROVE MATERNAL HEALTH

Access to clean water thanks to electricity is essential to reduce health hazards, to benefit modern sanitation and to improve health conditions.

> ENSURE ENVIRONMENTAL SUSTAINABILITY

Developping micro solutions that use a major part of sustainable and local resources, such as solar panels or hydraulic turbines, reduce environmental impacts and help to preserve the planet.

OUR WORK FOR THE DEVELOPMENT OF THE LOCAL COMMUNITIES THANKS TO ELECTRICITY AND WATER

Electricians without borders considers essential to involve the local populations to identify their specific needs and to choose, with them, an efficient and sustainable solution. This close work with the local communities is also crucial for the viability of the installation. For each project we carry out, we make sure that a committee is created to manage and pay for the maintenance.

LAOS

We were asked to help supply the poor population of 24 villages of the Phongsaly province with electricity through the installation of pico hydro turbines in local rivers. 54 young rice farmers received training on the implementation, utilisation and maintenance of the pico hydro turbines. 10 villages (with 2 pilot projects in each village) were equipped by these trained technicians. “Village management committees for electricity” were gradually set up and various public meetings were held between the locals and the Electricians without borders teams, to raise awareness of electrical hazards and energy savings.



Pico hydro tubines in Phongsaly, Laos

MADAGASCAR

We developed a project in Skalalina, Madagacar to provide a 3 500 inhabitant village with safe water. We installed a gravitational system with a 5 kilometers underground canal to supply water from mountains to 20 public fountains among the village, as well as a concrete dam, a treatment structure, a water tower and various equipments such as taps. We helped the creation of a water committee to manage the compulsory economic participation of community members, therefore enhancing community benefits.



Public fountain in Skalalina village, Madagascar

CAMBODIA

We were asked by the local Association for the development of the Svay Sar Community to solve out their water supply issues. We dug deep drillings, installed pumps connected to solar panels and built several public fountains in the village. Those actions will contribute to improve the sanitation conditions and will guarantee a durable access to safe water for the 4 000 inhabitants of this Cambodian village.



Public fountain among the village of Svay Sar, Cambodia

CAMEROON

The association Caritas Genève asked us to solve out the water and energy issues of a center for blind people near the villages of Dschang and Bafou. We installed a submerged pump in the well and built 3 public fountains. We provided the rooms of the center with electricity and training for the maintenance of the installations.



Water tower for the villages of Dschang and Bafou, Cameroon

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KEEP IN TOUCH !

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