



2016
ACTIVITY
REPORT

Nexans
FOUNDATION
For fair access to electrical power

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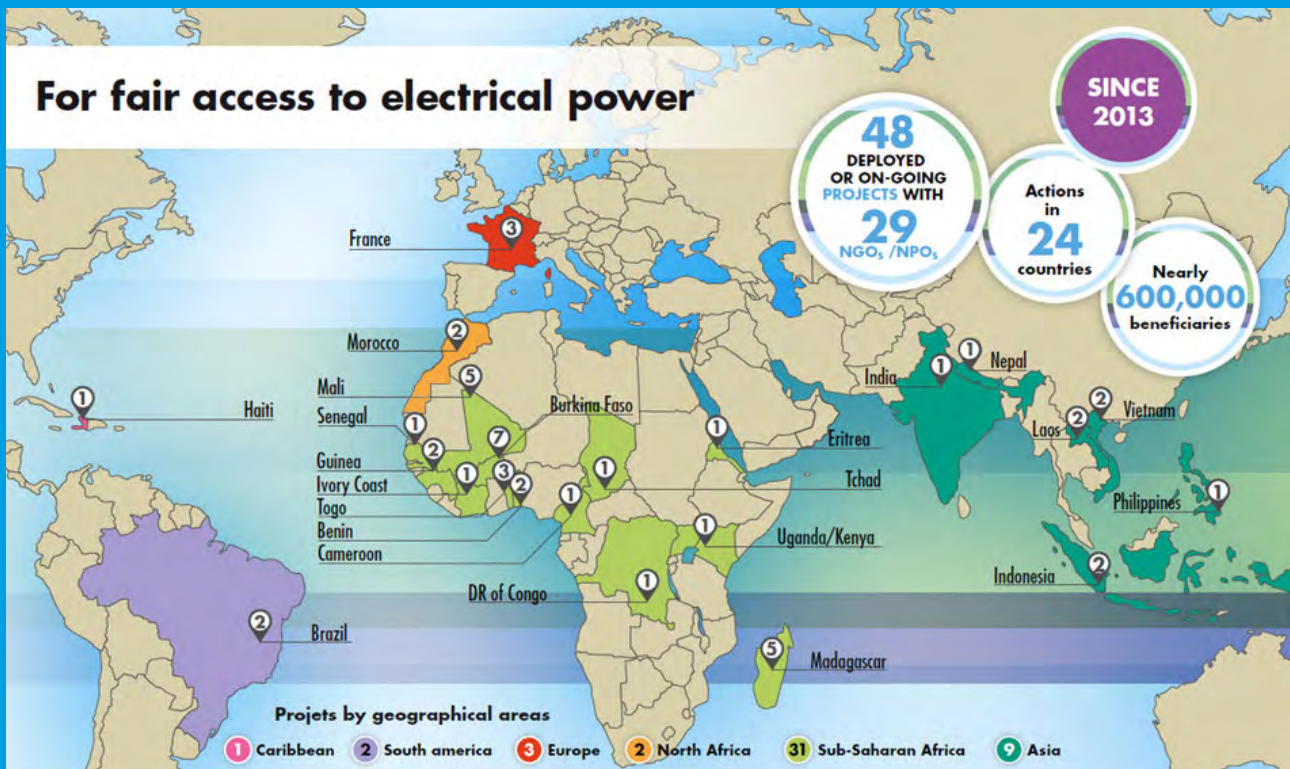
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EDITORIAL

For fair access to electrical power

Arnaud Poupart-Lafarge
Chairman of the Nexans Foundation
Chief Executive officer of Nexans



Created in early 2013, the Nexans Foundation aims to help bring electrical power to disadvantaged communities throughout the world by giving priority to local organizations and sustainable solutions. This commitment follows on from the United Nations call in 2012 to promote awareness worldwide about energy poverty and the importance of developing access to energy. In 2015, the UN took this initiative further by including an energy component in its new sustainability targets – ensure access to affordable, reliable, sustainable and modern energy for all (Sustainable Development Goal No. 7) – a priority long recommended by the International Energy Agency (IEA¹) which advocates universal energy access by 2030.

Energy does not only provide access to light; it improves education, healthcare, women's empowerment, economic development and more.

The essential needs that must be met. Sustainable Energy for All² currently estimates that 1.1 billion people do not have access to electricity and at least 2.9 billion people do not have access to clean energy for cooking. More than 95% of these people live in sub-Saharan Africa or in developing Asia.

With an annual budget of 300,000 euros, the Nexans Foundation has supported 48 projects in 24 countries in

partnership with 29 organizations, since it was created. These projects have brought or plan to bring electrical power to nearly 600,000 people.

The Nexans Foundation operates in all countries and primarily in countries affected by energy poverty. While most of the Foundation's projects are run in Sub-Saharan Africa (in 14 countries), projects also exist in Morocco, Asia (in six countries), Brazil, Haiti and France.

The Nexans Foundation also supports one-off projects in emergency situations (e.g., Haiti in 2016).

The Foundation launched a volunteer program called "We Are Volunteers" in September 2015. This solidarity initiative, which is currently being tested in Europe, gives Group employees the opportunity to volunteer their personal and professional skills that may be needed by the Foundation's partner

organizations. In 2016, volunteer employees took part in 16 assignments, including a photo report project in Madagascar with the Fondation Energies pour le Monde.

In 2017, the Foundation will continue to develop its actions in new countries with the support of other associations and the backing of its network of Nexans ambassadors' network and employees worldwide. We strongly encourage everyone to support these actions and to commit to volunteering their services to our partner associations.

**SUPPORTING 29
ORGANIZATIONS
AND HELPING
OVER 600,000
PEOPLE
SINCE 2013**

¹ www.iea.org

² http://www.se4all.org

WE ARE VOLUNTEERS

In September 2015, the Nexans Group introduced a skills volunteering program called "We are volunteers." This solidarity program gives all Group employees in Europe the opportunity to volunteer their professional and personal skills to the associations supported by the Foundation.

Sixteen assignments have already been completed including one in Madagascar where a Group employee went to support the association Energies pour le Monde with a photographic assignment.



«I WENT TO MADAGASCAR WITH THE NEXANS VOLUNTEERING PROGRAM»

My name is Sylvain Bizeau. I am 32 and I work at the Nexans Mehun-sur-Yèvre plant in the center of France. My day job involves writing up quotations, technical proposals and electricity calculations.

What was my motivation in choosing this assignment?

I wanted to see the world from a different perspective. And I like photography. I'm not a professional but it's something I love. I applied without really believing I would be selected. After all, I'm not a photographer. But I write in my application that my experience and passions would make me a good candidate.

What key messages would you like to convey to our colleagues to encourage them to follow your example?

There are so many people who would love to do this sort of thing. Start by registering your interest. It doesn't mean that you'll go on an assignment, but do it anyway. Don't worry about getting tired or about the holidays you will miss with your friends or family. Think about what you can give knowing that you will get far more in return: landscapes, smiles, conversations and experiences you will never forget.

if you could do it again, go for it!

If it was do over, what other assignments would interest you?

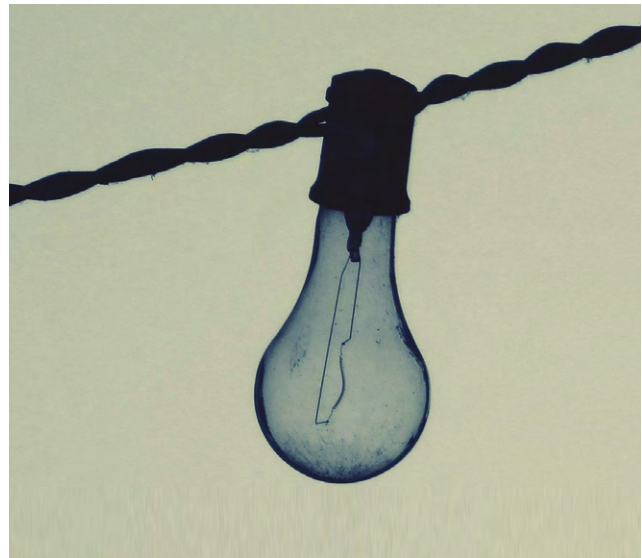
I would take at the opportunity to go to shoot other stories.

WE ARE VOLUNTEERS!

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TOWARDS SOLIDARITY THROUGH ELECTRICAL POWER: FIGHTING FUEL POVERTY IN FRANCE WITH **LES AMIS D'ENERCOOP**



The **Énergie Solidaire** (Solidarity Energy) project focuses on fundraising through micro-donations on power bills **to support local actions to fight against fuel poverty in France**. Enercoop will be the first power supplier to propose donations by rounding up to the nearest euro. A committee

of experts will manage the project and the allocation of the funds raised. The association's purpose is to **promote an accessible energy transition for all through information, training and support**.





AUTONOMOUS ELECTRIFICATION EQUIPMENT TO DEVELOP SCIENTIFIC MEDIA LIBRARIES IN MADAGASCAR WITH **ACCESMAD**



The project aims at developing an electrically self-powered configuration for a **scientific library** in secondary schools that have considerable difficulty with their power supply. It will be used to test the media library in autonomous mode. All the network-connected computers will be replaced by a configuration using **computers powered by solar**

panels and their power supply equipment.

Four secondary schools in the city of Ambohimahasoa have so far been identified, including one high school that already has network computers but which was planning to stop using its media library because of the lack of a regular power supply.

The project should benefit **900 school students.**



ELECTRIFICATION OF A VILLAGE IN GUINEA USING A MINI-NETWORK POWERED FROM A HYBRID SOLAR-PICO-HYDRO POWER PLANT WITH **ÉNERGIES POUR LE MONDE**



This new sewer would see her production rise thanks to energy access



The working team at the projected location of the hydroelectric power plant



In Guinea, **rural areas have a very low level of electrification: 3% in 2012.** Most of the electricity available in these areas is supplied by generators, and the households spend 20% of their monthly income on energy

(batteries and kerosene). The people targeted by this project are suffering from fuel and energy poverty.

In Middle Guinea, electricity is required for domestic uses (lighting and refrigeration), social needs (health and education) and economic activities (small retail and craftsmen). A reliable and affordable power supply adapted to the population's purchasing power is therefore needed to create opportunities for

Guinea has a high number of hours of sunshine. Also, as the water tower for West Africa, its rainfall and streams are

ideal for installing small run-of-the-river hydro plants. In this way, **So these two complementary energy resources** deliver a continuous power supply.

The PEHGUI project mainly focuses on reducing the poverty of rural communities by providing them a long-lasting access to electricity supply.

By developing local sources of hydro and solar power, and training the partners, the project aims to:

- improving families' living conditions
- developing local economic activities
- improving social services (health, education, administration and security) while respecting the environment.

The project aims to build on results and best practices for future replication and improve the skills of the employees of the newly-created rural electrification Agency.



CHAD

CREATION OF A MODERN MARKET IN CHAD WITH **THE CST FOUNDATION**



The Canton of Banda largely comprises **rural communities** with a total population of 100,000. Most are subsistence farmers. Their income is very precarious and income-generating activities are limited because of an absence of a reliable power supply network. **This lack of energy** leads to an underdeveloped local market. Food is displayed on the ground leading to serious food storage problems. The market has no electricity or roof and of

course, closes very early. Rain causes health risks that are of even greater concern when the market is flooded. The main aim of this project is **to improve the socio-economic conditions** of the Banda communities by installing a **modern market with electrical power**. The market will be covered with a roof with **solar panels** that will generate power for lighting the market; solar-powered lighting will also be installed in **the areas neighboring the market**.



RENEWABLE ENERGY SUPPLY FOR A VILLAGE IN TOGO WITH **SOS VILLAGES D'ENFANTS**



In Togo, electricity supply is intermittent, expensive and subject to a massive increase in load shedding. **This problematic access to electricity** has a negative impact on the country's economy as well as the populations' home activity, especially on children whose evening studies are disrupted.

The project aims to install **solar panels on its 10 family homes**. This **renewable energy** will make the village **energy autonomous while protecting the environment** by reducing the village's footprint and improving the comfort of the SOS mothers and children accommodated in the village.



BRAZIL

INSTALLATION OF PHOTOVOLTAIC SOLAR PANELS IN BRAZIL WITH **INSTITUTO PACTO AMAZÔNICO**

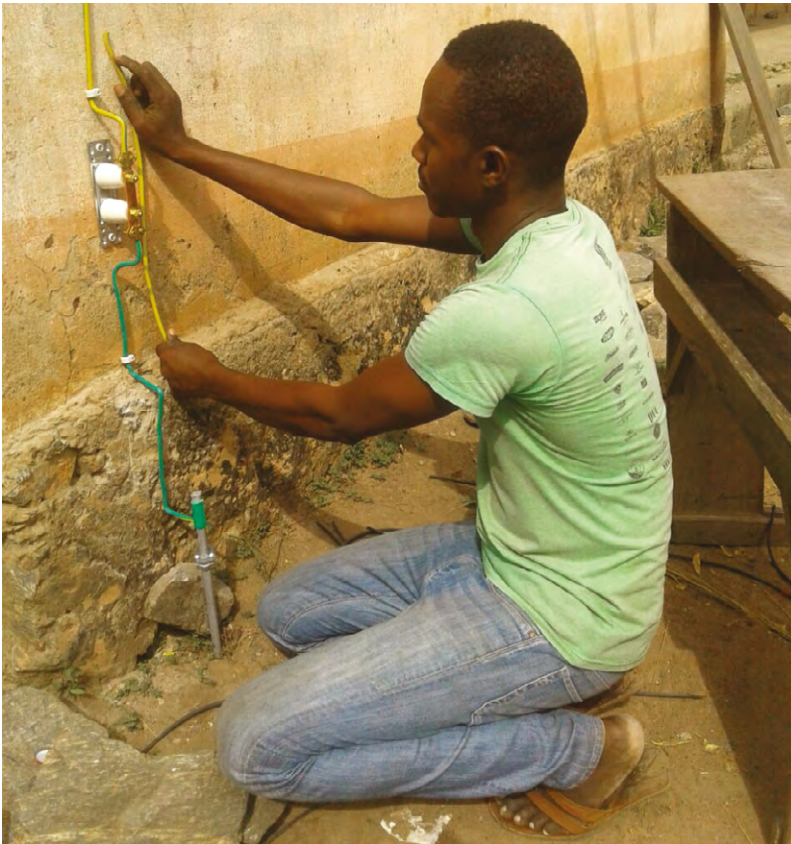


This project involves providing **clean energy to isolated communities in the Amazonian jungle**. Currently, they have small diesel-powered generators. The production of green energy will **significantly improve the quality of life** of these families.





SOLAR ELECTRIFICATION OF A SCHOOL IN TOGO WITH **WOMEN OF AFRICA**



The electrification of Gaméglé School will enable pupils to revise their lessons and do their homework outside school hours under improved conditions with a view to improving the pass rates. It will also enable **better use of the library** created jointly last year by Women of Africa and Montsoult technical high school in France. **The teachers are involved in this project,**

which they actually initiated. They are willing to provide their time voluntarily to help pupils with their homework. This one-on-one assistance for pupils should help offset the downsides of the school's extremely large classes.

Teaching adults, women in particular, to read is also one of the project's stated aims. Women from the neighboring villages have agreed to join this program in the evenings and on weekends.



ERITREA

INSTALLATION OF PHOTOVOLTAIC SOLAR PANELS FOR A CLINIC IN ERITREA WITH **GRUPPO ALEIMAR**



This project involves **installing photovoltaic solar panels** to provide much-needed lighting and electrical power to a clinic in the mountain village of Zagher. The clinic is run by the Sisters of the Institute of the Daughters of Saint Anne in Eritrea and covers a catchment area with around **5,000 people**. It includes a maternity clinic where

around 150 mothers give birth each year and 900 women come for checkups. The clinic is connected to the public grid, but it suffers from outages that can **last for hours or days** (Eritrea is a very poor country and has no local sources of energy). This installation will **provide the clinic with a guaranteed continuous electrical power supply**.



SENEGAL

ELECTRIFICATION OF A VOCATIONAL TECHNOLOGY LEARNING CENTER IN SENEGAL WITH **ELECTRICIANS WITHOUT BORDERS**



People under 15 account for 42.6% of the population in Ziguinchor leading to a high demand for schooling in the region.

Vocational training has undergone rapid growth in Ziguinchor, as it provides

young people with qualifications that lead to jobs. The region now has a certain number of centers teaching vocational courses. Under a partnership dating from 2007, La Mache school in Lyon, France, with the Ziguinchor regional department of education has helped **introduce technical training courses in electricity and metal structures** in response to the local companies and young people's needs. Given the energy crisis from which the country is suffering, especially the Ziguinchor region, the expertise provided by Electricians Without Borders will make the **technical workshops autonomous** and less dependent on the unreliable national power grid.

The project's overall aim is **to improve the quality of vocational training** for future craftsmen and entrepreneurs,

and so enable young people to build a future for themselves and achieve personal fulfillment through learning. This in turn will put life into the region and stem the exodus to large urban centers.

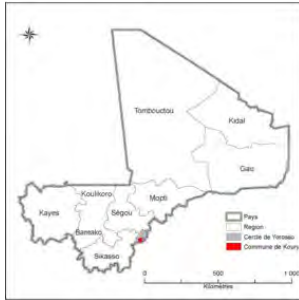
More specifically, the project aims to provide 57 students initially, and then 240 at a later stage, with access **to quality technical training in electricity and metal structures** thereby providing them with the possibility of employment in the region. Power from an electricity delivery point supplied by the local distributor will provide power for lighting and power to the Ziguinchor vocational and technical training center, which has two 300-square meter workshops, 10 classrooms, an administrative building and a toilet block.

Additionally, **a 12 kVA solar installation will be installed** to provide lighting for the buildings. It will also be used to help train the students in solar power technology. It will be equipped with power source converters and inverters in case of excessively fast battery power drawdown.



MALI

SOLAR ELECTRIFICATION TO ENCOURAGE RURAL ENTREPRENEURS IN MALI WITH GERES



In Konséguéla, a small rural town in southern Mali, 50 km from the power grid, the Nexans Foundation supported **the creation of a ‘electrified business park’ (ZAE)** in 2014 and 2015 that now hosts 11 local very small companies. **The ZAE supplies them with renewable electricity and assists them with their economic development.**

This new “EnergiSER” project aims to replicate and adapt this innovation in a small neighboring rural town, on the Burkina Faso border. Kourou, unlike Konséguéla, has **a small hybrid power plant** (solar and thermal) that provides power to several neighborhoods, principally for household lighting from 4.00 pm to midnight.

Small companies, that mainly operate during the daytime and whose power requirements would overload the network are deprived of access to the electricity they need to develop. **The creation of a new ZAE**, in this instance called a PEP (Productive Energy Pole), will host 15 very small companies that will be able to connect to a power plant and single dedicated

line, thereby avoiding the local grid’s unreliability. During the daytime, its **autonomous energy infrastructure** will be directly powered by the solar power plant without the need for storage, providing electricity for the small companies during the hours when the grid is shut down.

To provide a more durable response to energy issues for the productive sector, the project also plans to **help create a local solar power sector** by providing professional training in the distribution, size calculation and maintenance of photovoltaic kits for the very small companies isolated throughout the municipality.

In all, the project will aim to provide better access to electrical power for 50 artisans and retailers – 20% of whom are women – to train 200 installation and maintenance technicians, boost awareness of 500 professionals and institutions about **innovative and sustainable practices around decentralized rural electrification** and access to new products and services for the municipality’s 10,000 residents.



YOUTH SOCIO-PROFESSIONAL INTEGRATION THROUGH VOCATIONAL TRAINING IN ELECTRICAL AND ENERGY TRADES IN MOROCCO AND IVORY COAST WITH IECD



Unemployment affects 21.7% of young Ivoirians and 37.8% of young Moroccans in urban areas. Yet, both these countries

have **dynamic economic sectors**: the manufacturing, building and public works, transportation and automobile industries are all keen to employ electricians, electrical fitters and technicians. However, the available vocation training does not correspond to companies' needs because of the unsuited curricula, theory teaching methods, outdated equipment and the lack of technical and cross-sector expertise.

The European Institute for Cooperation and Development (IECD) is therefore **creating partnerships**

with the existing vocational training centers to assist them in the following areas:

- strengthen ties with companies, boost awareness of employment areas and update curricula
- workshop refurbishments, equipment renewal, technical

The project, first developed in Lebanon in 2007, has spread to five other countries. The Nexans Foundation **is supporting its rollout in Morocco and Ivory Coast.**

The project's main objective is **to encourage the socio-professional integration** of young people by **improving training in the electricity and energy trades**, which both provide potential employment opportunities.



SOLAR ENERGY TO SUPPORT CHILDREN’S EDUCATION IN MALI WITH UN ENFANT PAR LA MAIN



Access to electricity is extremely poor in the entire project area. It is therefore difficult for children to do their homework in the evening as **they have no light**. This situation affects their level of learning.

The primary school attendance rate is 76% for girls and 87% for boys. After this important stage in their education that lays the ground for future learning, the attendance rate in junior secondary school drops to 60%, and then dramatically to just 27% in senior high school. According to Unicef, *“the repeat and dropout rates in primary schools is particularly high among girls in rural communities and the ongoing high rates of illiteracy perpetuate the cycle of poverty.”* Today, just 39% of women aged 15 to 24 are literate, compared with

56% of men aged 15 to 24.

This **solar electrification project** will enable children to do their homework and get coaching in the evening.

Fougani school has an enrolment of 386 students, seven classrooms built out of solid materials, an office for the headmaster and a store for school supplies. New buildings have just been built for primary students.

With **the electrification of all the classrooms**, the children will be able to do their homework at school in the evening. For the students in 6th, 8th and 9th grades who have exams to sit, the teachers will be able to run coaching classes to help them prepare. The teachers will also be able to use the evening hours to prepare their classes.

These classrooms could **also be used to introduce literacy classes for adults**.



REFURBISHMENT OF SCHOOLS AND RAISING ENVIRONMENTAL AWARENESS AMONG YOUNG CHILDREN WITH **ARS86CARE** **IN INDONESIA**



ars86care
foundation

The **“Space to Build”** program involves building educational facilities in rural areas to **encourage children** from an early age to gain **awareness of the environment** in which they live and play and the need to look after it. In particular, the

program includes the construction of suitable classrooms in schools, playgrounds, basic sanitation facilities, storm water treatment systems, energy sources, lighting, etc.

The Foundation has been supporting this project since 2015.



BRAZIL

INSTALLATION OF A MINI-SOLAR POWER PLANT FOR INDIGENOUS PEOPLES IN BRAZIL WITH **ECO A – ECOLOGY & ACTION**



The mini-solar power plant will **provide power** to households, two refrigerators and the village

school in a remote community. This community has a population of 120 people and is extremely isolated as it takes 28 hours by boat to reach the village.

The community mainly survives on fishing and the sale of wild rice and palm tree fruit.

In recent years, most of the houses were destroyed by major flooding of the Paraguay River.

The people use diesel or kerosene-powered generators for lighting, which cause lung problems for children and the elderly.

They have to use a lot of salt to store food which has resulted in high blood pressure problems for 95% of the families.

The project will significantly **improve the community's quality of life.**



HAITI EMERGENCY: WORKING WITH **ELECTRICIANS WITHOUT BORDERS** FOLLOWING THE PASSAGE AFTER HURRICANE MATHEW

As soon as Hurricane Matthew struck in Haiti on October 4, 2016, Electricians Without Borders swung into action to help the victims of this humanitarian disaster. The Nexans Foundation responded quickly to Electricians Without Borders' request for assistance.



As soon as Hurricane Matthew struck in Haiti on October 4, 2016, Electricians Without Borders swung into action **to help the victims of this humanitarian disaster.**

The Nexans Foundation responded quickly to Electricians Without Borders' request for assistance.

The first assignment on site delivered solar lighting kits to help those structures that had an immediate need to carry out their work (kits with 3 W – 6 V crystalline solar panels, two rechargeable LED lamps and charging socket for mobile phones). A total of 120 kits were cleared through customs with the assistance of the French Embassy. They were checked and transported to the southern area of the island. More than **240 bulbs** were very simply and rapidly installed **to provide lighting for families** who had been without lighting since the hurricane had hit.

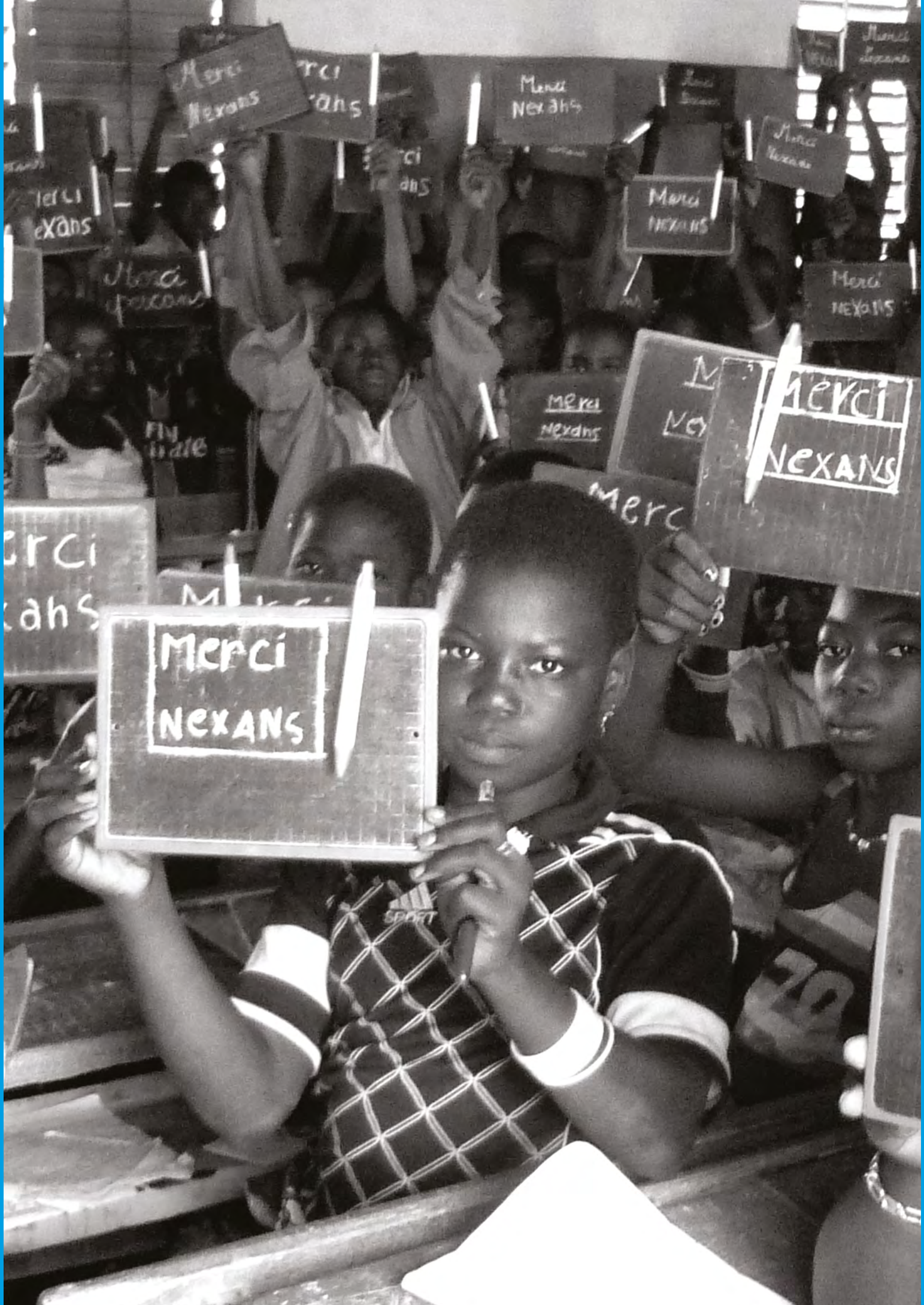
Given the rise in cholera and other diseases associated with poor water quality, the **role of health services** (screening and care) had become crucial. Electricians Without Borders therefore decided to refurbish the solar power plant at Camp Périn Hospital whose **photovoltaic array** had been totally destroyed.

The new facility **covers the electricity needed for**

lighting, power sockets and refrigeration for food storage. The project also included outdoor lighting for the building with two solar lamp posts.

An additional **20 locations for lamp posts** were identified as requiring urgent attention ranging from replacing a few parts to the complete replacement of the lamp post. **The refurbishment of solar lamp** posts will provide evening and night lighting to improve security and recreate the conditions needed for social life in the devastated areas.





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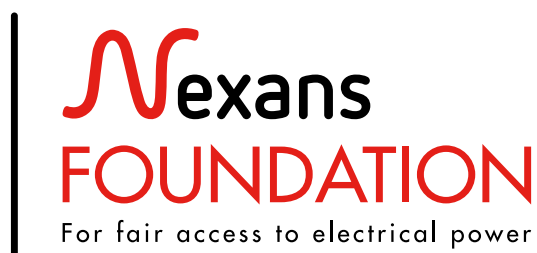
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