

# Mali

## Access to energy, access to opportunity



A worker puts a new cookstove into a customer's car. Improved cookstoves use less fuel and reduce pollution.

### A lack of energy hinders growth

Around the world, there are 1.3 billion people without access to electricity. They rely on kerosene to light their homes and have to collect fuel and cook using open fires or inefficient cook stoves, leading to 4.3 million premature deaths annually from household air pollution – and about 38,100 of these deaths are in Mali. Clean, safe solar lighting reduces indoor air pollution, fire hazards and high household costs on inefficient fuels.

Concerted efforts are needed to provide clean, basic and productive energy services across Mali, because energy access is a vital component of poverty reduction. Mali has abundant sunshine, so solar energy is an option which is increasingly being explored. Improving access to energy will provide opportunities for businesses to grow, children to study at night and reduced indoor air pollution will improve health.

Christian Aid partner Mali Folkecenter (MFC) works to provide renewable energy to rural communities that have no electricity supply at all. Since 2010, Christian Aid and MFC have been working on initiatives for the promotion and sale of low-cost renewable energy technologies to enable the rural population of Mali to access energy services such as lighting, mobile phone charging and cleaner, more efficient improved cook stoves.

### A novel boutique

Christian Aid supported MFC to set up a pilot initiative to find a new way to approach access to energy challenges. MFC worked with local entrepreneurs to set up two *Boutiques Energétiques* – one is on a main road leading to Côte d'Ivoire, while the other is in Garalo village, near a school and health centre. These sell solar lanterns, solar home systems, cell phone charging panels, improved cook stoves, LPG gas and butane gas for cooking.

People can buy the products directly from the shop or they can apply for microcredit through Nyetaa Finance, a microfinance initiative set up by MFC, and then repay the costs in installments. The shop owners were trained in running the shops, ordering and accounting, and MFC enables them to order products collectively. There are some challenges with product supply and rural delivery (the products are imported from Germany), and matching supply with demand fluctuations – MFC is continuing to address these. For example demand for the goods is affected by the rainy season, rural retreat, and school term timings.

The solar lanterns have proved the most popular product and they have multiple benefits and uses. As well as lighting, people can charge phones on them. Fuel costs are reduced and they are safer than kerosene or petroleum lamps. Children are able to study at night, and businesses such as tailors and restaurants use them. The lights have been so popular other entrepreneurs are now also selling them independently in the towns. Local entrepreneurs have also bought solar mobile phone chargers and have set up local businesses offering this service to customers.

The energy shops provide opportunities for new enterprises to start up and existing businesses to use lighting to increase their turnover and trading hours.

Isoumaila Kouyate owns Sanya Couture, a women's tailor shop in Garalo. He bought a solar light to use in the shop a few years ago and it was so good that he decided to buy another two lights. Kariba Kone who runs the *Boutique Energétique* in Garalo village gave Isoumaila training on how

to charge and use the new lights for maximum benefit.

## A sunnier future

Access to electricity is also essential in Mali at community level. In Zantiebougou, MFC have set up a solar grid to provide electricity to the village. About 70% of people now have some electricity; the remainder are out of reach of the grid. This means that the health centre can now keep drugs refrigerated, saving people a 30km trip to the next town, and women can give birth in a well-lit clinic, rather than in the dark, and there is hot water to clean the newborn babies.

Shopkeepers have been able to develop their businesses – for example by selling cold drinks and making ice, and one shop has a fridge to keep fish fresh. Children study under the first streetlights the town has had – at the end of the first year their exam results had improved, and they have continued to learn together under the community's lights. Community life has expanded, with people socialising at night, watching TV, listening to music or just chatting. There is now a rural radio station which supplies information to 42 villages on topics from social events like weddings, to farming information at the start of harvesting.

## The multiple benefits of cleaner cooking

Christian Aid is also working with a private local manufacturer of improved cook stoves, Katene Kadji, in Mali to expand and improve the production and marketing of local artisan stoves to make energy usage more efficient at a household level – clean cook stoves particularly benefit women and girls.

Cleaner stoves use 50% less fuel and emit less smoke. By making these more widely available, the social and health benefits are huge, reducing deforestation, saving time spent collecting fuel, keeping girls in school who would otherwise be gathering firewood, reducing indoor air pollution and developing local businesses and livelihoods.

By developing local production and supply of stoves the local economy is being supported, and employment created. As with the *Boutique Energétiques*, customers are being supported to buy stoves via microfinance programmes.

## Next steps for energy access in Mali

MFC are now expanding the *Boutique Energétiques* and plan to establish five shops serving more than 10,000 people with clean energy solutions for lighting and cooking.

Christian Aid, with support from Bread from the World, are also supporting MFC to pilot more community owned solar mini-grids, as well as solar panels for home use. This approach builds on MFCs business experience supplying solar panels for use in businesses, health centres and in Zantiebougou village with clients paying for usage.

Christian Aid believes that poverty eradication does not need to go hand in hand with massive carbon emissions. Access to sustainable, affordable, reliable and safe energy is key to lifting people in developing countries out of poverty and creating the necessary infrastructure to provide healthcare, education, sanitation, clean water,



**Massaran Samake** demonstrates the solar lamp her mother bought from a shop set up by Mali Folkecenter. Massaran and her family live in an area on the outskirts of Bamako that has no formal electricity provision. Massaran does her homework by the light of the solar lamp. Her mother, Habibatou Kone, is a nurse and uses the solar lamp in the health clinic she works at. The clinic is on the outskirts of Bamako where there is no formal electricity provision. Because it is portable she can use it at work and take it home to cook by when she goes home. Habibatou says the lamp is invaluable, particularly when local women come to the clinic to deliver. Before she bought the solar lamp, she used a battery-powered lamp but the light was poor quality and she frequently had to change the batteries, which cost her CFA600 (\$1) per week.

food security and employment. Our recent research with Ashden showed that energy enterprises are still in need of appropriate financial and technical support.<sup>1</sup> There is a huge potential for renewable energy across Africa which is largely untapped.

<sup>1</sup> [christianaid.org.uk/images/Ashden-Christian-Aid-Energy-Access-Enterprises-Report.pdf](http://christianaid.org.uk/images/Ashden-Christian-Aid-Energy-Access-Enterprises-Report.pdf)

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‘The commune has 42 villages. Our aim is that all those 42 villages will be connected to the electricity network, because the improvements that we have seen in our lives are the improvements that the other villages need as well.’

**Bakare Kone, president of the Zantiebougou electricity committee**

## Further information

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