

Energy Saving Lamps for Households in Madagascar



More than a quarter of a million lamps have been distributed, leading to a reduction in fossil-fuel based energy. Photo: Vaniah Rivoson / WWF Madagascar.

The project has replaced more than 500,000 inefficient, incandescent lamps by high quality energy saving lamps in nearly 130,000 grid-connected households benefiting over 600,000 people. This efficiency measure reduces the consumption of electricity.

In Madagascar, most electricity is generated by power plants operating on fossil fuels. Thus, reduced consumption of electricity translates into lower CO₂ emissions. This project also supports the establishment of a national regulatory framework in favor of low-carbon lighting at affordable price and introduces a technology for the appropriate treatment of used lamps. These activities are a cooperation of WWF Madagascar, WWF Switzerland and myclimate. It is implemented in partnership with the Ministry of Energy of Madagascar, the national energy and water provider (JIRAMA), and the TELMA Foundation.

Power production in Madagascar is characterized by fossil fueled power plants forcing Madagascar to import oil for more than USD 400 million each year. The resulting high carbon intensity of electricity production leads to large amounts of greenhouse gas emissions and is expensive. In fact, prices for electricity are so high that it is not affordable for many Malagasy people at all. In terms of lighting, the majority of households still uses inefficient lamps which intensify the energy poverty of the region. High quality, energy efficient lamps are either not available or most people can't afford them. Where energy saving lamps are available, they cost 5-10 times the price of a traditional, incandescent light bulb.

The brightness of the energy saving lamp is comfortable for my eyes, therefore I can do my job easily and I can have late appointments, which allows me to increase my income.

Project type:

Energy Efficiency

Project location:

Antananarivo, Madagascar

Project status:

In operation, exclusive

Annual CO₂ reduction:

approx. 6000 t

Situation without project

Higher electricity consumption from thermal power plants

Project standard

Gold Standard®

VER

Partner



Impressions



The energy-saving lamp has been burning every day for 6 years and makes the work easier, where good visibility is important, says Mrs Mbolatiana, Entrepreneur in the food industry, Tsiadana. Photo: Vaniah Rivoson / WWF Madagascar.

Mr. Alain, 38 years old, hairdresser, Besarety

The project aims at mitigating these effects through the introduction of high quality energy saving lamps at affordable price, a regulatory framework in favor of low-carbon lighting and the installation of appropriate treatment technology of used lamps. Carbon revenues from myclimate make it possible to sell the energy saving lamps at a subsidized rate. Thereby, the project enables close to 130,000 households in the capital of Madagascar to access high quality energy saving lamps. The use of these lamps will reduce a household's demand for electricity and lead to overall energy savings of 12.6 GWh per year. The distribution of the lamps, and the collection of the incandescent lamps, are accompanied by a public awareness campaign. The population learns about the benefits of using energy efficient lighting, appropriate handling of used lamps and their contribution to mitigating climate change by making use of this technology.

To embed these efforts in a beneficial environment, WWF promotes the development of a market for affordable low-carbon lighting. This is done in cooperation with government agencies through the establishment of a regulatory framework in favor of high quality, efficient lighting and a national ban on low-efficiency light bulbs. By doing so, this project promotes a circular economy with low carbon intensity and raises awareness of our global transition towards a net zero society. The first lamp treatment technology of its kind in Madagascar able to extract and isolate the mercury of old lamps was installed in a waste recycling center in 2018. More than 3,500 lamps have been collected, already.

Initiated in 2013, the distribution of energy saving lamps was completed one year later with great success: More than 518,000 lamps were disseminated to households in Antananarivo. The crediting period started in January 2015. Together with the Ministry of Energy and associated services the project achieved two landmark successes: The first was setting-up a collection and recycling system for the disposal of used lamps in Antananarivo – the first of its kind in Madagascar. The second was developing and passing a national ban on inefficient lamps, which was adopted in 2020.

This project contributes to 4 SDGs (as of end 2021):

Find out how myclimate reports these SDGs in our FAQ.

The following SDGs are verified by the Gold Standard:



15 per cent savings on electricity costs result in an average annual household saving of EUR 32.



A household saves 175 kWh per year, the average annual net electricity savings of the whole project are 12.6 GWh.



"In my workshop I can work even after sunset thanks to the energy-saving lamp. And I have a lower electricity bill." M. Ambinintsoa, 25 years old, tailor, Analamahintsy. Vaniah Rivoson / WWF Madagascar.



The project called "Lumitsits" aims at creating a market and a national regulatory framework for energy efficient light bulbs in Madagascar, thus enabling energy savings and access to safe energy for all. © WWF



Energy efficient light bulbs consume five times less electricity than traditional lamps. © WWF



A recycling and safe disposal scheme for used or failed lamps was installed and is operational.



6,829 t CO₂e are reduced in average per year from the reduced demand from electricity.