

Fossil Fuel Free and Green building of the Raleigh Fitkin Memorial Hospital Eswatini (Swaziland)

THE PROJECT

The project involves the energy requalification of the Raleigh Fitkin Memorial Hospital in Manzini, the main city in Swaziland after the capital Mbabane. The interventions will ensure the hospital self-sufficiency energy, through the use of solar energy, the reduction of consumption and climate-changing emissions, and the efficiency of some essential services such as water heating and cooling of the premises. The project will save 1,595 tCO₂ emissions each year and reduce hospital bills by 61%, resulting in annual savings of €97,433.

BACKGROUND

The Raleigh Fitkin Memorial Hospital is made up of 35 buildings: the clinical wards extend over 7,000 m² and can accommodate 350 patients a day, while the administrative structures have an area of 2,300 m². The hospital was built around 1970 and is characterized by rather low energy efficiency performances. The energy requalification of the Manzini hospital will constitute a case study to be disseminated in the rest of the country, both in the public and private sectors.

OBJECTIVE

Reduction of CO₂ emissions and energy consumption.

PLANNED ACTIVITIES

- Replacement of 3,470 neon lamps with LED lamps equipped with automatic activation sensors.
- Replacement of air conditioning and water heating systems with heat pumps that use low environmental impact refrigerant gases.
- Replacement of steam generators and diesel generators with more efficient electrical systems.
- Installation of a 1 MWp photovoltaic system on land, close to the hospital.
- Installation of an emergency energy storage system, to ensure the continuity of essential services during blackout hours.

SUBJECTS

Promoters:

- Ministry of the Environment and Energy Security (MASE)
- Ministry of Tourism and Environmental Affairs of Swaziland (MTEA)

Actuators:

- UNDP - Center on Climate Change and Sustainable Development for Africa
- Swaziland Ministry of Natural Resources and Energy

DURATION

November 2018 – June 2023

TOTAL COST OF THE INITIATIVE

€2,204,372

Lender: MASE

CONTRIBUTION TO

➡ **NDC Swaziland:** double the contribution of renewable sources to the energy mix compared to 2010 levels within 2030.

➡ **Agenda 2030:** Goal 7 - Sustainable energy; Goal 13 - Actions for climate.

OUTPUT

- 1 photovoltaic system, with an area of 11,585 m² and connected to the grid, installed near the Raleigh Fitkin Memorial Hospital in Manzini.
- Raleigh Fitkin Memorial Hospital equipped with LED lamps and heat pumps for air conditioning and water heating.
- Personnel trained on the ordinary management of installed systems.
- Hospital website highlighting the various phases of the updated project.