

	Key Member States providing support: Germany and Sweden.
MANAGEMENT AND IMPLEMENTATION	
14. Type of financing	Indirect management with KfW Development Bank

1.2 Summary of the Action

Mozambique is a resource-rich country. The potential of renewable energy generation is significant but the share of renewable energy in the energy mix is currently limited to 1 %. This figure includes solar but does not consider hydropower which is the main source of energy. Mozambique is already a net exporter of electricity to its neighbours in the Southern Africa Power Pool (SAPP), with South Africa as main client. However, the potential for exportation is far higher and the country aims at becoming an energy hub for Southern Africa.

Despite recent improvements, the national electrification rate reaches only around 38 % of the population in Mozambique with important disparities between urban (73 %) and rural (5 %)². The situation is also marked by a regional imbalance: the average rate in the south is 72 % while only 24 % in the north and centre of the country.

The country has set ambitious targets for its energy sector: by 2030, universal access as well as 62 % of renewable energy in the energy mix, and 20 % of solar and wind generation in 2043.

However, these targets are hampered by the fact that Mozambique does not have an appropriate control of its electricity grid. The Mozambican power grid currently comprises two independent and unconnected sub-grids, a southern grid and a grid in central and northern Mozambique. The power utility, Electricidade de Moçambique (EDM), operates with a dispatch centre furnished with outdated equipment that only controls parts of the southern network. The central/northern grid is currently only monitored and managed on a manual basis. The lack of a National Control Centre restrains to perform a remote and automated control of the entire high and medium voltage grid, to control the voltage and frequency stability and the balance between supply and demand. This is a major constraint for EDM to deliver stable and reliable power to all parts of the country, especially to the north, increasing as such territorial inequalities, and hindering social cohesion and national integration. It also limits the capacity for Mozambique to integrate more variable and intermittent renewable energy into the grid. It finally impedes Mozambique to consolidate its position as major energy exporter to neighbouring countries through the SAPP, thus limiting regional integration within the Southern Africa Development Community (SADC). Mozambique is the only country in Southern Africa region without a National Control Centre (NCC).

The construction of a National Control Centre for energy has been prioritised in the ‘Integrated Master Plan for Mozambique Power System Development 2018-2043’ and is a flagship project for EDM which has the ambition to become a smarter, more modern, performant utility at medium-term. It is also a prerequisite for the implementation of the National Electrification Strategy and has a strategic role for the development of the energy sector in the country.

The action, whose planned duration is 72 months, aims at improving the reliability and sustainability of the power supply nationwide, specifically in the north and in the whole Southern African region, enhancing the capacity of the grid to integrate more generation from renewable sources and contributing to the digital transformation of the electricity sector, including the installation of optic fibre. The action will positively contribute to the achievement of universal access to energy in Mozambique and the transition towards renewable energy.

The action entails the construction and refurbishment of four buildings in Matalane (Greater Maputo), Maputo, Chibata (centre) and Nampula (north) to respectively host the principal National Control Centre, the backup Control Centre and the two regional Control Centres. All centres will be equipped with a Supervisory Control And Data Acquisition/ Energy Management System (SCADA/EMS) for automated monitoring and control of the Mozambican power grid. The action also includes substation adaptation measures, e.g. installation of Remote Terminal Units (RTU), installation of telecommunication infrastructure, using optical fibres and wireless solutions, capacity-building and training for EDM and a 5 year-service and maintenance agreement.

This action is fully in line with the priority areas 1 and 2 of the 2021-2027 Multi Indicative Programme for Mozambique, ‘Growing Green’ and ‘Growing Youth’. In contributing to renewable energy generation and therefore to climate change mitigation, the action is also perfectly aligned to the Green Deal, in general, and the

² https://trackingsdg7.esmap.org/data/files/download-documents/2021_tracking_sdg7_report.pdf