

Report

Domestic hot water technology transition to solar thermal systems: Barriers and opportunities in Maputo city, Mozambique

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Abstract

Like other developing countries, Mozambique is also facing problems related to electricity shortages due to expanding access to electricity and consumption. Over the past 15 years, electricity demand increased by an average 9% annually [1]. Mozambique's electricity supplier is making efforts to build new power generation plants to meet the growing demand; however, it has been unsuccessful due to the shortage of financial resources [1].

The present report aims to analyse the barriers and opportunities for a wide implementation of solar thermal systems (STS) for domestic water heating, based on a field survey of the main technology barriers, as well as, on a socioeconomic assessment of the type of investment that best suits the specificities of the communities.

It is concluded that there are technical, economic and behavioural barriers to the wide implementation of STS, being the most prominent the lack of dissemination and the investment cost of the systems. Further, two scenarios of investment of the STS were analysed; one considering the Government as investor and another considering the end-user itself as investor. Results point that the replacement of electrical systems can be done through the introduction of STS with electrical backup in both technical and economic terms. Any investment scenario brings benefits to both the end-user and the electric sector. However, it is recommended that the government should create specific legislation for solar systems including legal incentives and consequently, support market deployment to make the systems more affordable to the communities. Additionally, there is a need of policies to encourage the implementation of solar systems in new buildings.

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