

TITLE: ENERGY MANAGEMENT IN BUILDINGS AND INDUSTRIES: CHALLENGES
AND BENEFITS: A CASE STUDY OF DAR ES SALAAM CITY.

ABSTRACT

Managing the energy and other needs in buildings efficiently have considerable benefits but though have challenges. It is a method to monitor and control the building's energy needs. Next to energy management, the system control and monitor a large variety of other aspects of the building regardless of whether it is residential or industrial. The functions managed were heating, ventilation and air conditioning, lighting or security measures. This technology is applied in both residential and industrial buildings.

In response to the fact that residential and industrial buildings in Dar Es Salaam consume a amount of the energy produced Tanzania, We did a study of two residential building at Kigamboni in which one solar powered and another is powered by TANESCO. The aim was to check the effectiveness of energy-efficiency and sustainability in residential homes using different energies. The effectiveness of each of the building and components were discussed and evaluated using analytical methods

However, results show that energy savings can be achieved by employing solar power generation, solar hot water heating, energy-efficient building materials and passive solar heating. Passive solar heating using a thermal storage wall incorporating phase change material is evaluated in more detail to determine the effects of wall materials on performance. Using solar energy was the best performance rather than TANESCO beneficially. This is because solar energy does not need having bills, except only initial cost is high.