Solar energy is proved to be an important resource leading to sustainable livelihood in residential buildings. Active and passive solar are two main technologies by which solar energy can be harnessed for comfortable but eco-friendly livelihood in residential buildings. Active solar technologies mainly comprise the various equipments which are used (mainly) as solar photovoltaics (for electricity generation) and solar thermal (for heating applications). The electricity produced by solar photovoltaic panels. Passive solar techniques are mainly concerned with the harnessing of solar energy without specific equipment. In passive solar technique, the design of the building is made in such a way that the solar energy can be harnessed providing a cost effective comfortable living without any carbon footprint. One of the most important outcomes of active solar and passive solar techniques is the conservation of energy, saving of fossil fuels and consequently the reduced carbon footprints. Another advantage of these techniques is very low (or nil) operative cost for energy use in a building. In this paper, active and passive solar technologies are discussed and the role of their effective utilization has been analyzed. It is also observed in this paper that the efficient utilization of active and passive solar technologies leads to inexpensive and eco-friendly livelihood in residential buildings. Such buildings, uses these techniques are called as zero energy buildings (ZEBs).

References:
