PROBLEMSTATEMENT

The primary challenge faced in many regions, especially rural areas, is the lack of reliable access to electricityfrom thegrid.Solar energy offers a sustainable solution, but efficient and affordable inverters are often not readily available. Many inverters on the market are expensive, require high maintenance, or are not suited for small to medium-scale solar power systems. This project aims to design an affordable, efficient, and reliable solar-powered inverter with a capacity of 2 kVA, which will cater to the needs of homes and small businesses.