

ABSTRACT

The development of this website-based battery and solar panel capacity calculation application for off-grid solar power system solutions aims to provide convenience for users in designing renewable energy systems. With the increasing need for sustainable energy sources, especially in areas not covered by conventional power grids, this application is designed to assist users in determining the battery capacity and the number of solar panels required based on daily energy consumption data. The method used in the development of this application is the waterfall model, which includes requirements analysis, system design, implementation, and Testing. This application allows users to perform accurate calculations by simply entering the required data. In addition, the application also provides recommendations for solar panel specifications available in the Indonesian market, so that users can choose products that suit their needs. The result of developing this application is expected to increase public understanding of off-grid solar power systems and encourage the wider use of renewable energy. Thus, this application not only serves as a calculation tool, but also as a useful source of information for users in planning and implementing a sustainable renewable energy system.

Keywords: Application, Off-grid, Waterfall, Battery, Solar panel, Energy