Design and Implementation of Trainer Kit for Hybrid On-Grid Solar Power Generation System

Oleh: Muhamad Ali, Alex Sandria Jaya Wardhana, Eko Swi Damarwan, Muhfizaturrahmah, Nurhening Yuniarti, Bagas Woro Saputro

ABSTRAK

New and renewable energy is one of the hot issues discussed by various energy experts in many countries. As a country that has enormous renewable energy potential, Indonesia has not utilized it optimally. One of the reasons is the inadequate learning of new and renewable energy in schools and colleges. This article will discuss the design and implementation of a Trainer Kit for Hybrid On-Grid Solar Power Generation System (TK-HOGS). With this Trainer Kit, it is hoped that vocational education students will increase their competence in new and renewable energy. This study uses a research and development approach that adopts the ADDIE model. The development stages include Analysis, Design, Development, Implementation, and Evaluation. The results showed: (1) The TK-HOGS can produce an average power of 22.74 Watt with an estimated electrical energy of 136 WH and (2) Media experts and electric power engineers stated that this TK-HOGS is "Very Good" and very suitable to be used to help lecturers in carrying out learning.

Kata Kunci: *trainer kit, TK-HOGS, solar power generation, renewable energy*