

ABSTRACT

This research discusses energy diversification analysis using the integration method of Solar Power Plants (PLTS) and Wind Power Plants (PLTB) using HOMER energy software with the research location being in the Pangandaran Regency Office area. The potential for new renewable energy obtained is solar radiation of 5.03 kWh/m² and an average annual wind speed of 4.84 m/s. HOMER energy is the world's leading microgrid system planning software that simulates and optimizes renewable electricity generation systems based on generator calculations, namely Net Present Cost (NPC), Cost Of Energy (COE) and Levelized Cost Of Electricity (LCOE). The results obtained by simulation using HOMER Energy are used to be reviewed by calculating energy density, power consumption for electric cars, and test scenarios for the results under certain conditions which are then used as a reference for planning the electricity generation system for the PLTS and PLTB off grid integration method for charging cars. electricity in the Pangandaran Regency office area.

Keywords : *Electric Cars, HOMER, PLTB, PLTS.*