

ABSTRACT

At this time the installation of solar panels is generally placed in a certain position without any changes. for example the installation of solar panels facing upwards. With the position of the panel facing up, the panel will only get maximum radiation when it is perpendicular to the sun or during the day. This means that when solar radiation in the morning and evening is not absorbed optimally.

To overcome these problems, research will be carried out to increase PV power output by using Fuzzy Logic and solar trackers. The fuzzy logic method used is the Sugeno method. The solar tracker system uses a linear DC motor and an LDR (Light Dependent Resistor) sensor to detect the intensity of sunlight. The use of the Sugeno method was chosen because it has a simpler output function and a faster response than the Mamdani model because of its simpler calculation [1].

The test was carried out twice, located in Taman Puspa Indah housing complex, Bandung City. Based on the test results, the comparison of the output power of static solar panels with solar trackers in the first test has a difference of 7.17 watts or 19.89% greater than static solar panels and in the second test it is 10.08 watts or 22.25 % larger than static solar panels.

Keywords: Solar panel, fuzzy logic, LDR, linear DC motor, Sugeno method, solar tracker