

ABSTRACT

This final project discusses the change in the temperature of the solar cell with respect to capacity of the output power with the hypothesis that at 12.00 – 16.00 the output is in optimal conditions but there is a decrease in the solar cell as a result of the temperature in the specified time span. This research was conducted on the roof of P Building (Deli), Faculty of Electrical Engineering, Telkom University by taking some data using solar cell temperature measurement device and the resulting current so as to obtain more accurate and continuous data. Temperature data collection was carried out at three points to obtain the surface temperature value of the solar panel. In addition, the study also took light intensity data. In this study, we obtained the same intensity value but had different values for current and temperature. The value of the output power on the solar panel from 12.00 to 16.00 shows a decrease with an average decrease of 2,8991 W every 15 minutes or the equivalent of 0,1932 W/minute. In conclusion that temperature has an influence on the power capacity generated by solar panels with an average effect of 2,42 W/°C. The higher the temperature of the solar panels, the lower the performance of the solar panels.

Key word : solar cell, temperature, renewable energy