CHAPTER 6

CONCLUSION AND RECOMMENDATION

6.1 Introduction

In this chapter, the conclusion and future recommendation will be discussed. In conclusion, the objective of this project will be analysed to see it was being achieved or not. The future recommendation for this project will be suggest to improving the quality and also the performance of the project design.

6.2 Conclusion

The 240 V power generator uses solar that has been fully tested and successfully run. During functional testing and measurement, the output value of the sensing system also works well. With this development prototype, it can be concluded that one of the alternative ways in reducing electricity bills is by using renewable energy. Electrical energy is produced and generated by the sun which is derived from natural energy. From this natural energy, it is converted into electrical energy that can be used in our daily lives. Thus, the first objective is achieved the completion of the second test has successfully produced the set results. For the second objective has been achieved after the results from the generator system can be measured successfully. For the third objective in the system that has been

produced there is no combustion process and the sound energy is not too strong so the objective has also been achieved.

6.3 Recommendation

After implementing this prototype, there are some recommendations that can be improved for future used in order to generate more voltages that bring more power. There are several recommendations in developing 240 V power generator by using solar.

For further development, the project can be developed as-

- Addition of the internet of things system.
- The addition of an inverter that can produce greater energy.
- Addition of a socket that produces a dc voltage such as USB.

REFERENCES

[1] Dirk Ume Sauer (2003), “Electrochemical Storge fo Photovoltaics”. A. Luque and S. Hegedus (Ed.), Handbook of Photovoltaics Science and Engineering (pp.799-862). Englance John Wiley & Sons.

[2] Gavin D.J Harper & Willie Nelson, “Solar Energy Projects For The Evil Genius”, Mc Graw Hill (2003).

[3] Geoff S tapleton, “Grid-Connected P V System Design and Installation – 1st Edition”, (2007), 149-166.

[4] M. Leijon, O. Danielsson, M. Eriksson, K. Thorburn, H. Bernhoff, J. Isberg, J. Sundberg, I. Ivanova, E. Sjöstedt, and O. Ågren. An electrical approach to wave energy conversion. Renewable Energy, 31(9):1309 – 1319, 2006.

[5] Telkes, Maria. “Solar Thermoelectric Generator.” Journal of Applied 23:6 (June 1954): 765-777.

[6] M. S. A. B. Balbir Singh Mahinder Singh, Nursyarizal Mohd Nor and Nor Athirah Zainal, "Development of two-axis sun tracking system," presented at the American Institute of Physics Conference, 2012.

[7] U. S. a. P. M. Jansson, "Perfomance Measurement of Amorphous and Monocrystalline Silicon PV Modules in Eastern U.S.," presented at the International Instrumentation and Measurement Tecnology Conference, 2009.

[8] D. D. N. a. B. Lehman, "Modeling and Simulation of Solar PV arrays under Changing Illumination Conditions," july 16-19, 2006 2006.

[9] N. Barsoum, "Fabrication of Dual-Axis Solar Tracking Controller Project," Intelligent Control and Automation.

[10] Langseth, B. (2003). Electrification in Uganda, Master's thesis, Norwegian University of Science and Technology.

[11] Nieuwenhout, F., Dijk, A., Hankins, M., Wade, H., van Roekel, G., Dijk, V. A., Sharma, B. D., Arriaza, H., Hirsch, D. and Lasschuit, P. E. (2001). Experience with solar home systems in developing countries: A review, Progress in Photovoltaics 9: 455–474.

[12] UNBS (2000a). Uganda Standard Specifications for Fluorescents Lights for use in PV systems. Uganda National Bureau of Standards.

[13] Stapleton, G., Gunaratne, L. and Konings, P. (2002). The Solar Entrepreneur's Handbook, Global Sustainable Energy Solutions Pty Ltd.

[14] UNBS (2000b). Uganda Standard Specifications for the Installation of PV systems. Uganda National Bureau of Standards.

[15] Green, D. (2004). Thailand's solar white elephants: An analysis of 15 years of solar battery charging programmes in northern Thailand, Energy Policy 36(6): 747–760.

[16] Bbumba, S. N. M. (1999). Uganda's strategy for acceleration grid-based renewable power generation for a clean environment.

[17] Diaz, P. and Lorenzo, E. (2001). Solar home system battery and charge regulator testing, Progress in Photovoltaics.

[18] Green, D. (2004). Thailand's solar white elephants: An analysis of 15 years of solar battery charging programmes in northern Thailand, Energy Policy 36(6): 747–760.