

CHAPTER FIVE
RECOMMENDATION
AND
CONCLUSION

5.1 Conclusion:

- Sudan has vast tracts of open land, which afford a suitable environment to run wind power plant it has positive impact of the environment.
- Generally wind speed in Sudan is average which reach 4m/s and this speed is low and not suitable in the electrical generation, but suitable for pumping water ,while in eastern Sudan .specifically port Sudan , where the speed is 6m/s could use in electrical generation.
- Through exposure to previous studies in wind turbine the right type for electrical generation is horizontal axis wind turbine three type blade because it high power coefficient and high speed.

5.2 Recommendation:

Wind turbines are considered areas of modern research in Sudan, especially a horizontal axis wind turbines and we have reached in this study to some of the information which they can take advantage of wind energy for electricity generation and It has been manufacturing small scale model based on the information that has been obtained. From the above it can be said that this information is in the nucleus of information for research and development of wind energy project.

Finally we can be recommended follows:

- The data presented in this project can be considered as a nucleus of information for research and development of wind energy project.
- Also we recommend when we use wind energy for electrical generation is preferable to use a horizontal axis wind turbine three blade type.
- Design attached in this research can be further continued to be studied and further developed

Reference:

1-Ahmad Hemami,(2012) ‘WIND TURBINE TECHNOLOGY; Montreal: Cengage

Learning.

2- Abdeen Mustafa Omer, (2006) ‘On the wind energy resources of Sudan’. ELSEVIER, Volume (23).

3-Prof. Dr. Manfred Stiebler(2008), Wind Energy Systems for Electric Power Generation, Springer-Verlag Berlin Heidelberg.

4- Dr. Gary L. Johnson(2001), Wind Energy Systems.

5- Peter J. Schubel * and Richard J. Crossley,(2012), Wind Turbine Blade Design, energies, volume(25).

6- Altab Hossain, (2007) ‘DESIGN AND DEVELOPMENT OF A 1/3 SCALE VERTICAL AXIS WIND TURBINE FOR ELECTRICAL POWER GENERATION’. Journal of Urban and Environmental Engineering, volume (60).