FAULT CURRENT ANALYSIS IN A DISTRIBUTION SYSTEM WITH DISTRIBUTED GENERATION

This project report is presented in partial fulfillment for the award of the

Bachelor in Electrical Engineering (Hons.)

Of

UNIVERSITI TEKNOLOGI MARA (UiTM)

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ACKNOWLEDGEMENTS

First of all with the name of Allah SWT the most gracious and merciful to our prophet Muhammad SAW. Thanks to ALLAH SWT for giving me opportunity to complete this project successfully within the given time. I would like to express my deep sense of gratitude and appreciation to following person below:

I. My supervisors :-
   - Puan Zuhaila Bt Mat Yasin
   - For her consistent help and guidance as well as prevision of their valuable time, encourage and patient during the period to complete this project.
   - For her supervision and willingly gives her ideas and suggestions for completing my project. All the knowledge's that had been given by her during this period will always is my precious treasure.

Last but not least, I would also like to thank every single man, which are willing to help me in contributing their idea and help in indirect or direct way. Thank you very much for their advice and support, where only Allah could pay back their kindness and will appreciate it till the rest of our life. The experience I gained during completing this project made me realized the challenging and competition in working field in the future. Finally, my love and gratitude, I want to dedicate this thesis to my family who has supported me throughout, especially to my mother.

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ABSTRACT

This paper studies about the symmetrical fault current analysis (3-Phase Faults) in a distribution system with distributed generation and also describes the consequences and operating limitations of installing distribution generator (DG) to electric power systems (distribution system). Transmission line faults can be classified using the bus voltage and line fault current. Monitoring the performance of these two factors are very useful for very useful for power system protection devices. This paper will discuss the changes in fault current by comparing the changes during the fault current occur without distribution generator (DG) and with the distribution generator (DG). So this paper will evaluate fault current due to effect in electric power system with the adding of the distribution generator (DG) in distribution system. The simulation will be implemented on an IEEE 69-bus distribution system by using power system simulation programme for planning, design and analysis of distribution system which is Power System Simulator/Advanced Distribution Engineering Productivity Tool (PSS/ADEPT) software. The results of maximum fault current in a distribution system with the presence of DG might be useful for power system engineer to consider protection devices before installing DG in the system.

KEYWORDS: Fault Analysis, Symmetrical Fault, Distribution System, Distributed Generation

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