IMPACT OF INTEGRATING EMBEDDED GENERATION ON NETWORK VOLTAGE, FAULT LEVEL, AND REAL AND REACTIVE POWER INTO UiTM PULAU PINANG DISTRIBUTION NETWORK USING PSS ADEPT AND PSS E.

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DECLARATION

I hereby declare that this Final Project Report, submitted to Universiti Teknologi Mara as a partial fulfillment of the requirements for the degree of Bachelor of Electrical Engineering (Hons) hs not been submitted as an exercise for a degree at any other university. I also certify that the work described here is entirely my own except for excerpts and summaries whose sources are appropriately cited in the references.

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ABSTRACT

Over the last few years, Malaysia has experienced a rapid economic growth resulting in an everincreasing demand of electricity. This has prompted Malaysia's government to invite private power companies to build, own and operate power generation facilities to meet the growing needs of electric power in the country. Recently, all private power generation plants in Malaysia are subject to central dispatch by TNB (Tenaga Nasional Berhad) and respond directly to the national electricity demand. In this Final Project Report, it is consisting (i). Analyze the impact of embedded generation on network voltage, fault level and real and reactive power into Universiti Teknologi Mara Pulau Pinang distribution network (ii). Compares voltage profile, fault level and real and reactive power before and after connecting embedded generation (iii). Control the voltage rise when the embedded generation installed. Embedded generation is connecting generation to the distribution network as connecting Solar Photo Voltaic or wind turbine to distribution network. The interconnected high voltage transmission network allows generator reverse requirements to be minimized, the most efficient generating plant to be dispatched at any time and bulk power can be transported large distances with limited electrical losses [1]. Power System Simulator Advanced Distribution Engineering Productivity Tool and Engineer (PSS ADEPT/E) software was used in this project to study the impact of the embedded generation on the distribution network.