

**THE ASSESSMENT OF GENERATION, TRANSMISSION AND  
DISTRIBUTION RELIABILITY (HLIII) IN POWER SYSTEM**

Thesis is presented in partial fulfillment for the award of the  
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## **ABSTRACT**

This project highlights in the power system reliability in hierarchical level III (HLIII). The power system reliability analysis is to ensure a reliable operation of distribution network system. Hierarchical level III is important to the power utility company to improve the design of distribution system in order to meet the customer demand and the changes of that design are fit to the system. The purpose of this project is to analyze the hierarchical level III on 6 bus test system. Based on this 6 bus test system, HL III analysis is made with 2 case studies. First case study is the analysis on 3 buses and second, is the analysis on the 5 buses. The methodology of HL III includes the reliability indices of such as the system average interruption frequency index (SAIFI), system average interruption duration index (SAIDI), customer average interruption duration index (CAIDI), average service availability index (ASAI), average service unavailability index (ASUI) and expected energy not supplied (EENS).

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