FINAL YEAR PROJECT REPORT
DIPLOMA IN MECHANICAL ENGINEERING
MARA UNIVERSITY OF TECHNOLOGY
SHAH ALAM

PASCA ENERGY SYSTEM

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AZHAR B. ZAKARIA

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2. Dr Ahmed Jaffar — *Our Advisor*

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MAY ALLAH BLESS ALL OF YOU

ABSTRACT

As demand for energy usage increased, the quality of the electricity provided to commercials and industrials sectors need to be upgraded. The quality of the electrical energy supplied has not been improved in recent years although the demand has grown tremendously with the increase in the Malaysian economy from the industrial manufacturing sector.

In view of the electrical energy wastage with high transient current, problems had already occurred as examples given below:

- Non productive work due to machine stoppage and idling
- Higher electricity bill due to unnecessary energy usage
- Low machine performance and efficiencies due to power supply interruptions
- Reduced life span of electrical equipment due to equipment failures with respect to power surges

The above problems had affected the smooth running of the industrial operational activities. The organisations that are directly affected and had a serious consequence either in terms of losses in income or revenue and services provided by them to the customers resultant to electrical energy interruptions are namely industrial buildings, manufacturers, offices, hospitals, supermarkets and otliers that are too many to mentioned here.

Take an example in USA the power disruptions already cost them more than $ 50 billion annually. And a case in Montreal in 1989 left six million people without power.

Recently, in Malaysia the electricity power waste has increased due to urbanisation and economic progressing. As reported by TNB, industry that uses a lot of electrical motors had contributed to these problems. Steps and measures had been taken to effectively overcome the problem. Hence, to have more efficient electricity energy usage and to improve the quality of the electricity supplied, a new power supply