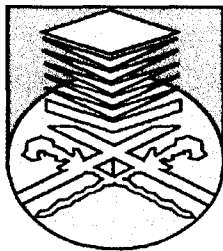


**POWER FACTOR PERFORMANCE AT MSB NO.1 IN
INTERNATIONAL EDUCATION CENTER UiTM SECTION 17
SHAH ALAM**

This thesis is presented in partial fulfillment for the award of the
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ABSTRACT

This case study is concerned with the investigation on the existing power factor performance at MSB No 1 INTEC UiTM section 17 Shah Alam. The case study being conducted to fulfill the power factor requirement set by Tenaga Nasional Berhad as a supply provider higher than 0.85. Penalty will be charge if the power factor reading below 0.85. By increasing the power factor performance, penalty by the electricity supplier (TNB) can be avoided. The study is then to recommend the proper technique to improvement the power factor performance overcome the penalty cost by TNB.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The history of the INTEC goes way back to 1983 when UiTM (then known as ITM) was given the task of preparing overseas bound student with the necessary academic skills and knowledge before continuing their studies abroad. To date, thousands of students who began their at this campus have successfully completed their studies at prestigious universities in the United States, United Kingdom, Australia, New Zealand, Germany, France, Japan, Korea and the Middle-East. Formerly known as the Centre for Preparatory Studies or Pusat Pendidikan Persediaan (PPP), the centre is one of the pioneers of international education in Malaysia. The average monthly electrical bill at INTEC is in the range of RM200, 000.00 – RM250, 000.00 per month. In additions to that there was a surcharge due to lower power factor. MSB substation no. 1 of INTEC is chosen to be the case study because it was surcharged by TNB due to low power factor. The power factor of the system must be at the 0.85 or 1 as set by TNB. It is to ensure that in the future the problems that related with power factor can be reduced. An electrical system may comprise a different type of load source as resistive, inductive and capacitive element. The significance of these different types of load is that, true or useful power can only be consumed in the resistive part of the load, where the current is in phase with the voltage. The power factor is the ratio of real power and work whenever apparent power is the apparent power. The ratio of true power to apparent power is known as the power factor. For an ideal, pure resistor, the power factor would be 1. When the actual ratio is less than 1, it means that some of the current drawn from the electricity supplier is non-productive. Real power is the power that supplies the equipment in the system and