

**A CASE STUDY ON IMPROVEMENT OF HIGH VOLTAGE  
POWER DISTRIBUTION SYSTEM IN INTEC CAMPUS**

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**MARA UNIVERSITY OF TECHNOLOGY**



**KAMAL ARIFFIN BIN MOHD FAUZI  
FACULTY OF ELECTRICAL ENGINEERING  
MARA UNIVERSITY OF TECHNOLOGY  
40450 SHAH ALAM  
SELANGOR DARUL EHSAN**

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## **ABSTRACT**

Nowadays there were increased in quantity of students at Intec Campus due to target of UiTM management to increase the quantity of students at UiTM for entire campus in Malaysia. These increases of students lead to construct new building in locate students and lecturers hence will increase load demand in Intec Campus.

By this increasing of load demand, it has created some problems that related to the high voltage power distribution system of Intec Campus such as the existing one unit 2000kVA transformer at Substation No 1 did not support anymore the load demand thus make it increase in temperature and vibrate due to high load demand.

The other problems related to the other substations in Intec Campus will be discussed further in this study later. From the problems, the suggestions will come out at the end of this study in order understand and improve the high voltage system in Intec Campus.

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# CHAPTER 1

## INTRODUCTION

### 1.1 OVERVIEW

In general, the basic construction of power system consists of generation, transmission and distribution. Generation is the process of creating electricity from other forms of energy such as coal-fired, hydropower and natural gas-fired. Transmission is the process of transferring electrical energy from the generating plants to distribution substation. The transmission system usually transmit high voltage capacity to reduce the loss while transmit the electrical energy to the distribution substation. Distribution is the final stage in delivery electricity to end user.

In this case study, the Intec Campus high voltage power distribution system is 11kV that is from 11kV TNB power supply at main substation or Substation No 1. The substation category at Intec Campus is all indoor substations where all the equipment such as transformer, circuit breaker, switchgear and capacitor bank were placed in small block building and this type of substation is quite safe compare to outdoor substation.

This case study is carry out in purpose of study the load demand in Intec Campus with increase in number capacity of student and to study the high voltage power distribution at Intec Campus. In this case study, the methodology that will use are by doing the initial preparation that is doing literature review, make observation and construction of data, record and also analyze the result obtain and then come out with some suggestions.