



**IDENTIFICATION OF UNUTILIZED ENERGY IN
UiTM BUILDINGS AND PROPOSAL OF
CONTROL SYSTEM FOR ENERGY
OPTIMIZATION**

**KAMARUL RIDZUAN BIN HJ ABDUL KHALID
(98713449)**

**BACHELOR ENGINEERING (HONS)
(MECHANICAL)
UNIVERSITI TEKNOLOGI MARA (UiTM)
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ABSTRACT

Energy auditing is a process which is very much central to the work of an Energy Management. There are numbers of ways looking at an Energy Audit. In general sense an Energy audit is a study of energy use and the preparation of a report showing ways in which energy usage can be reduced.

As electricity is easy to use, it is also easy to waste. Wasteful practices and poor maintenance of equipment have often been cited as the cause of whopping energy costs. Air-conditioning and lighting consumes the most energy usage. Therefore, energy management has been an important role to conduce organization saving energy for their short time survival and long time success.

This thesis has described about the energy use, costs, technologies, the way people use energy, and recognizing opportunities to improves Energy Conservation Measures (ECM). The purpose of this thesis is also to implement an effective energy control system in order to achieve an optimal energy efficiency can be obtain. This thesis also analyzes the current situation of energy consumption at UiTM buildings and determines whether a new energy management program needs to be developed.

Hence from the study carried out, it is found that air-conditioning and lighting consumes the most unutilized load during overnight period at the Budisiswa (HEP) Building. Therefore the implementation of energy control system; Carbon Dioxide Sensor at Air Cooled Package Unit (ACPU) to control outdoor air intake for ventilation purposes is significantly reduce energy usage and save costs. It is observed that energy management is important because operation cost can be minimized and energy usage is optimized. Lastly, through identification and implementation of Energy Saving Measures (ESM) , energy consumption in UiTM building can be reduced.