



**ENERGY AUDITING AND ENERGY SAVING MEASURE OF THE LIGHTING
SYSTEMS IN THE UITM ENGINEERING TOWER BLOCKS**

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A thesis submitted in partial fulfillment of the requirement for the award of Bachelor
Engineering (Hons) (Mechanical)

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NOVEMBER 2009

ACKNOWLEDGEMENT

In the name of ALLAH S.W.T., the Most Gracious, The Most Merciful. It is the deepest sense of the Al-Mighty ALLAH that gives me the strength and ability to complete this project. All good inspirations, devotions and prayers are due to ALLAH for blessing and guidance that have helped me throughout the entire project.

I would like to express my sincere gratitude and appreciation to my kindly supervisor, Prof. Madya Dr. Ramlan Zailani for his concern, valuable time of consultations and advice, guidance and patience in supervising my project from the beginning until the completion of this project.

Most of all to my beloved family, especially my father and my mother who the dearest person in my life and greatest source of inspiration, thank you for the endless love, the encouragement and being so understanding. Last but not least, special thanks to all my friends, lecturers and UiTM building maintenance Staff especially Mr. Abd Rashid Husin, the head of technician, for the valuable help and motivation during the completion of this project.

ABSTRACT

The lighting systems consume 12% amount of energy supplied in a commercial building in Malaysia¹⁶. In UiTM Shah Alam, most of the fluorescent lamps are always turned on 24 hours per day especially at the corridor site which contribute to significant energy wastage. Some areas also use excessive number of fluorescent lamps which the space becomes too bright and this will also contribute energy wastage. Various electrical energy saving measures are reviewed and proposed to be implemented to reduce energy wastage. There are two proposed methods which may reduce the electrical energy wastage from the lighting system. First is by calculating the optimum number of fluorescent lamps which fulfil the minimum requirement of lighting in the area or building. Second is by using a system that can control the lighting system while maintaining a comfort and safe environment in the building. This paper presents a study on the lighting system which focuses on fluorescent lamps at Science and Technology Mara Towers in UiTM Shah Alam especially along the lecturer's room corridor where the most of power wastage occurs. ECS time-based control system is the proposed system that can control the lighting system in the focused area which is expected to contribute a significant reduction in electrical energy consumption in the building is also presented.

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