

**CENTRE OF STUDIES FOR BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA**

**A STUDY ON THE IMPLEMENTATION OF ENERGY
MANAGEMENT SYSTEM (EnMS) IN THE GREEN BUILDING**

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**Academic Project submitted in partial fulfilment of the requirements
for the degree of
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**“I hereby declare that this academic project is the result of my own
research except for the quotation and summary which have been
acknowledged”**

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First of all, Alhamdulillah and I am very grateful because I am given the chance to do the study about the Implementation of Energy Management System (EnMS) in the green building in Malaysia. Even if the time given for the research to be conducted is enough but the challenges faced are quite thrilling. The study conducted smoothly and all the challenged and demanding can be handled. Although it seems to be impossible to finish this report in a short duration of time but it is possible for us to complete the objectives if the focus is given in order to complete the study.

In the name of Allah, the Most Gracious, the Most Merciful, I would like to draw both of my palm to show my faith and gratefulness towards HIS gifts upon me, divine patience, strength and great determination in completing my task. Besides, I would also say thanks to both of my parents for giving me a chance to continue my studies at this stage.

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As a fellow staffs of The Energy Commision Diamond Building, Setia City Mall and 1 First Avenue, who were gave me the chance to spend times in conducting the questionnaire surveys. Besides, they are also gave me experiences and knowledge about the research and other related. Thank you to all my friends that helped me to complete this study that was given and other parties who together gave the information to complete my study until I did the dissertation with a full of successful.

Thank you.

ABSTRACTS

The maintenance management is the act or skill of controlling and making decisions about a maintenance process. Facilities management and building maintenance are related because understanding of the process of maintenance is "maintenance management" and the understanding of building facilities maintenance is "building maintenance management". Maintenance have two main types, there are planned maintenance and unplanned maintenance.

The building maintenance is important as its preserve the heritage by extending their lifespan, preserving resources in order to reduce the need for new materials, maintaining the aesthetic values of a building at its finest, ensuring the safety of inhabitants and minimizing the production loss from failures.

The objectives of the maintenance management are as follows:

1. To ensure that the functional requirements of the facility are attained at all times.
2. To create a conducive and tenantable accommodation for owners and occupants users.
3. To enhance the quality of building structure to meet modern day requirements.
4. To prolong the life span of the building.
5. To preserve the physical characteristic of the building and associated services so as to reflect fewer breakdowns and thereby reduce the probability of early failure.
6. To ensure the assets are kept at reasonable standard and at least cost.
7. To maximize the economic and financial returns from the use of the building.
8. To ensure the safety of the user/occupants.

Jabatan Kerja Raya (JKR), Kemuncak Facility Management Holding (KFM) and Gemilang Maintenance are the case studies that have been chosen in Malaysia. For international comparison between Malaysia and other country, Hong Kong is chosen as the case study to be compared based on the scope of works, professional bodies, guidelines and current practice.

In conclusion, we hope the content of this assignment can be easily to understand and useful to others who needs.

1.0 INTRODUCTION

1.1 Introduction about the study

On this modernisation day, building can be seen through all nations in this world and the quantities of structures start to expand ordinary like developing mushroom. Building can be recognized as a structure with a rooftop and dividers that can give shield or give as a work environment and any others to the inhabitants and building clients. Building is not something new in this globalization period but rather has been around for quite a while however initially from a straightforward state of structure into a perplexing state of building today's. As per Hartungi & Jiang (2011), structures are in charge of no less than 40 every penny of vitality use in many nations.

Aside from the regular kind of building, green building is one of the acclaimed green advancements that have been produced to meet certain qualities and destinations. Green building is another kind of era of structures that considered the healthiest conceivable environment to the inhabitants and surroundings. Suhaida, Chua and Leong (2011) demonstrated that building industry has been recognized as one of the enormous asset client as building merge in themselves major files of energy and water utilization, crude material, employment and use of area. Green building advance guarantee that all the assets are utilized as a part of term of effectively and decently.

Green building is in charge of natural as well as all through the assets effectiveness beginning from configuration, development, operation, upkeep, redesign and obliteration. The principle objective for green building advance is to verify the individuals and indigenous habitat both encountered the less general effect from fabricated environment. Dissimilar to green structures, typical structures do being an incredible buyer to the assets, materials, vitality and water as opposed to monitored the utilization of every last one of components. The proficient utilization of area, vitality, water and assets will give awesome and rationed environment around the site of the structures.

Energy effectiveness is one of the options utilized as a part of green building to control and utmost the energy utilization as low as could be expected under the circumstances to meet the detail or necessity of green