TO STUDY AND RECOMMEND MEASURES TO MAKE FKM ADMINISTRATION BLOCK BE MORE ENERGY EFFICIENT

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TO STUDY AND RECOMMEND MEASURES TO MAKE FKM ADMINISTRATION BLOCK BE MORE ENERGY EFFICIENT

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Thesis submitted in fulfillment of the requirements for the award of the degree of Bachelor of Mechanical Engineering

> Faculty of Mechanical Engineering UNIVERSITY MALAYSIA PAHANG

> > JUNE 2013

EXAMINER APPROVAL DOCUMENT

I certify that the thesis entitled "To Study and Recommend Measures to make FKM Administration Block be more Energy Efficient" is written by Aina Syafiza Binti Jamalulail. I have examined the final copy of this report and in my opinion, it is fully adequate in terms of language standard, and report formatting requirement for the award of the degree of Bachelor of Mechanical Engineering. I herewith recommend that it will be accepted fulfilment of the requirements for the degree of Bachelor of Mechanical Engineering.

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SUPERVISOR'S DECLARATION

"I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Bachelor of Mechanical Engineering".

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I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged. The thesis has not been accepted for any degree is not concurrently submitted for award of other degree.

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TABLE OF CONTENTS

EXAMINER APPROVAL DOCUMENT	ii
SUPERVISOR'S DECLARATION	iii
STUDENT'S DECLARATION	iv
DEDICATION	v
ACKNOWLEDGEMENTS	vi
ABSTRACT	vii
TRANSLATION OF ABSTRACT	viii
TABLE OF CONTENTS	ix
LIST OF TABLES	xii
LIST OF FIGURES	xiii
LIST OF GRAPHS	xiv
LIST OF ABBREVIATIONS	XV

CHAPTER 1 INTRODUCTION

1.1	Introduction	1
1.2	Background of Study	1
1.3	Problem Statement	3
1.4	Objectives	3
1.5	Scopes of Study	4

CHAPTER 2 LITERATURE REVIEW

2.1	Introduction	5
2.2	Energy Sustainability	
	2.2.1 The Sustainable Design	6
	2.2.2 The Six Principles of Sustainable Design	6
2.3	Energy Efficiency	6
2.4	Energy Analysis in Non-Residential Building	8

Page

2.5	Energy Efficiency in Non-Residential Buildings	9
2.6	Factors Affecting Energy Usage in the Buildings	11
	2.6.1 Non-Design Factors2.6.2 Passive Design Factors	11 12
2.7	Climate Scenario in Malaysia	17
2.8	Energy Conservation in Universities	18

CHAPTER 3 METHODOLOGY

Introduction		19
Flow Chart		21
Close	Observation of FKM Administration Building	22
3.3.1 3.3.2	Building Features and Design Building Services	22 24
Air-Co	onditioning Systems	24
3.4.1	Split Unit System in DPM	25
Re-La	mp to More Energy Efficient Lighting System	26
3.5.1	Finding the Return on Investment (ROI) for Energy Efficient Solutions on Lighting in the FKM Admin's Lobby	27
3.5.2	Current Lighting System	28
3.5.3	Re-Lamp to T5 Fluorescents Lamps	29
Energy	Management	30
	Introdu Flow C Close C 3.3.1 3.3.2 Air-Cc 3.4.1 Re-Lau 3.5.1 3.5.2 3.5.3 Energy	Introduction Flow Chart Close Observation of FKM Administration Building 3.3.1 Building Features and Design 3.3.2 Building Services Air-Conditioning Systems 3.4.1 Split Unit System in DPM Re-Lamp to More Energy Efficient Lighting System 3.5.1 Finding the Return on Investment (ROI) for Energy Efficient Solutions on Lighting in the FKM Admin's Lobby 3.5.2 Current Lighting System 3.5.3 Re-Lamp to T5 Fluorescents Lamps Energy Management

CHAPTER 4 RESULT AND DISCUSSION

4.1	Introd	luction	34
4.2	No-Co	ost Measures	35
	4.2.1	Step One - Assemble the Energy Awareness Team	35
	4.2.2	Step Two - Set the Reference Points	36
	4.2.3	Step Three - Set the Objectives and Goals	36
	4.2.4	Step Four - Communication Programmes	38
	4.2.5	Step Five – Identify	41
	4.2.6	Step Six – Implement	42
	4.2.7	Step Seven – Evaluate and Track Result	42
4.3	Low-	Cost Measures	43
	4.3.1	Installation of Internal kWh Meters	43
	4.3.2	Change of the Lighting System	44

	4.3.3	Others recommendations	45
4.4	High-	Cost Measures	45
	4.4.1	Delayed Air-Condition Compressor Start-Up and Early Shut-Off	46
	4.4.2	Replacement of Current Air-Conditioning Regulators	46
	4.4.3	Installation of Split-Unit Air-Conditioning Systems for	46
		Lecture Rooms	

CHAPTER 5 CONCLUSION AND RECOMMENDATIONS

5.1	Introduction	48
5.2	Conclusions	48
5.3	Other Recommendations	49
5.4	Further Recommendations	50
	 5.4.1 Rain Harvesting 5.4.2 Encouraging Cycling as a Popular Mean of In-Campus Transport 5.4.3 Efficient Use of Paper 5.4.4 Encouraging Wastes Reduction and Management through 3R Practice 	50 51 51 51
REF	ERENCES	53
APPI	ENDICES	55
A1	FKM Administration Office Layout	55

LIST OF TABLES

Table No.	Title	Page
3.1	Information and electrical usage index for UMP Pekan	31

for 2009 – 2012

LIST OF FIGURES

Figure No	D. Title	Page
1.1	Office Buildings Electricity Consumption by CETDEM	2
2.1	Requirement and Compliance of Building Energy Standards	10
2.2	External Shading Design	16
3.1	The Key Definitions Used When Describing the Sun's Passage across a Site	22
3.2	(a) Left view of FKM Administration Building(b) Front view of FKM Administration Building	23 23
3.3	Air-Conditioning Calculator	25
3.4	The FKM Admin's Lobby Perimeter	26
4.1	Design One	38
4.2	Design Two	39
4.3	Design Three	39
4.4	Design Four	40
5.1	The Proposed Sustainable University Model	50

LIST OF GRAPHS

Graph	No. Title	Page
3.1	Average Monthly Cost in UMP Pekan for the Particular Years	32

LIST OF ABBREVIATIONS

ASEAN	The Association of Southeast Asian Nations
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning
	Engineers
BES	Building Energy Standards
CETDEM	Centre for Environment, Technology & Development, Malaysia
CFL	Compact Fluorescent Lamp
CRT	Cathode Ray Tube
DPM	Dewan Peperiksaan Mekanikal
FKM	Fakulti Kejuruteraan Mekanikal
FKP	Faculty of Manufacturing Engineering
GBI	Green Building Index
HVAC	Heating, Ventilation & Air-Conditioning
JPPH	Jabatan Pembangunan & Pengurusan Harta
KK5	Kolej Kediaman 5
LCD	Liquid-Crystal Display
LEO	Low Energy Office
PDCA	Plan-Do-Check-Act
PTM	Malaysia Energy Centre
ROI	Return on Investment
TNB	Tenaga Nasional Berhad
UMP	Universiti Malaysia Pahang
ZEB	Zero Energy Building