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ACHIEVING OF ENERGY EFFICIENCY IN HIGH-RISE OFFICE BUILDINGS.

By

A. W. Indradeva Mendis

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This thesis was submitted to the Department of Management of Technology of the University of Moratuwa in partial fulfilment of the requirements for the Degree of Master of Business Administration in Management of Technology.

Supervised By

Prof. Priyantha D. C. Wijethunge

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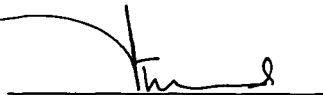
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Declaration

"I certify that this dissertation does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any University to the best of my knowledge and belief it does not contain any material previously published, written or orally communicated by another person except where due reference is made in the text."

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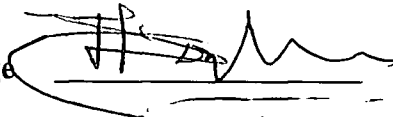
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TABLE OF CONTENTS

	Page No.
List of Tables	IV
List of Figures	V
List of Appendix	VI
Acknowledgment	VII
Abstract	VIII
1 Introduction	1
1.1 Background	1
1.2 Statement of Problem	5
1.3 Aims and Objectives	5
1.4 Scope and Limitations	6
1.5 Organization of Dissertation	6
2 Literature Review	7
2.1 Design and built efficiencies	8
2.1.1 Building Envelope & Glazing	8
2.1.2 Building Orientation & Shape	10
2.1.3 Building Air-conditioning system	11
2.1.4 Building Lighting system	13
2.1.5 Electrical power & Distribution	15



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2.1.6	Building Management Systems	16
2.2	Operational Energy Efficiencies	18
2.2.1	Energy Distribution	18
2.2.2	Building Energy Efficiency	18
2.2.3	Maximum Demand Management	19
2.2.4	Chilled Water Plant Efficiency	19
2.2.5	Power Factor Correction	20
3	Methodology of the Study	21
4	Conceptual Design	23
4.1	Sample selection	24
4.2	Nature and Form of Results	24
5	Theory & Formulas	26
5.1	Overall Thermal Transfer Value (OTTV)	26
5.2	Illuminance level	29
5.3	Heat Load of Office Lighting	29
5.4	Luminare Efficiency (Light Output Ratio-LOR)	29
5.5	Lighting Power Density (LPD)(W/M2)	29
5.6	Equipment Efficiency-Chillers	30
5.7	Chill Water Plant Efficiency	30
5.8	Chill Water Plant Energy Savings	30
5.9	Load Factor (should be around	31
5.10	Building Energy Efficiency (kwh/year/m ²)	31
5.11	Power Factor	33
6	Results & Discussion	34
6.1	Energy distribution	34
6.2	Energy consumption	35
6.3	Maximum demand	36
6.4	Design & built efficiencies	37

6.4.1	Overall Thermal Transfer Value	37
6.4.2	Shape	38
6.4.3	Orientation	39
6.4.4	Lighting System	39
6.4.5	Air-conditioning & Ventilation	43
6.4.6	Electrical Distribution System	45
6.5	Operational Efficiencies	45
6.5.1	Energy Efficiency	45
6.5.2	Energy Cost	48
6.5.3	Lighting System	49
6.5.4	Air-conditioning System	50
6.5.5	Power Factor	52
6.5.6	Energy Management Processes	53
7	Conclusions & Recommendations	54
8	References	57
	Appendix	59



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LIST OF TABLES

Table No.		Page No.
2-1	Overall Thermal Transfer Value standards	9
2-2	Minimum efficiency requirements for chiller plants	12
2-3	ASHRAE Standard chiller plants efficiency	12
2-4	Lighting power density (LPD) for building lighting systems	15
2-5	Building energy efficiency standards	19
6-1	Energy Consumption of Different Building Elements	34
6-2	Overall Thermal Transfer Values of a Typical Floor	37
6-3	Thermal Properties of Windows & Walls	37
6-4	Building Shape	38
6-5	Orientation of Buildings	39
6-6	Heat Load of Office Lighting	40
6-7	Average Illuminance Level (Lux) for different areas	41
6-8	Lighting Power Density (W/ m ²) for different areas	41
6-9	Lighting Control Switches for a Office Floor	42
6-10	Indoor Air Conditions (Designed)	43
6-11	Air Handling Unit Fan System Efficiency	43
6-12	Chiller Plant Efficiency	44
6-13	Transformers losses	45
6-14	Load factor	46
6-15	Building energy efficiency	47
6-16	Occupancy data	48
6-17	Energy cost	48
6-18	Lamp efficiency	50
6-19	Indoor conditions (Actual)	50
6-20	Chill water plant efficiency	51
6-21	Average Overall Power Factor	52
6-22	Energy Management Processes	53

LIST OF FIGURES

Figure No.		Page No.
1-1	Generation Mix	1
1-2	Electricity Price Comparison	2
1-3	Electricity Sales & Consumer Accounts in 2000	3
1-4	General Purpose Sector Sales & Accounts in 2000	3
2-1	Configuration of a Building Management System	17
4-1	Conceptual Design	23
6-1	Average Energy Consumption of Different Building Elements	34
6-2	Energy Consumption (kWh/ day)	36
6-3	Maximum Demand	36

LIST OF APPENDIX

Appendix No.		Page No.
Appendix-1	Recommended Lighting Levels	59
Appendix-2	Minimum Lamp Efficiencies	60
Appendix-3	Building Information	61
Appendix-4	Sample Data Sheet	64



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ABSTRACT

Energy is a vital and a decisive factor in any economy. The availability of energy has a great impact on the economic and social development. With the continuous increase in price paid for energy, there will be a substantial incentive for effective energy management. Therefore, energy management has to be considered as a core management process in any facility. The emphasis on energy conservation has therefore, to begin at the design stage and continue throughout the life cycle of the building project (design, construction, operation and maintenance).

The energy efficiency of a facility can be evaluated by analysing the Passive environmental controls and Active environmental controls. The passive environmental controls are such as building orientation, shape and thermal properties of its envelope. The active environmental controls are such as air-conditioning, lighting, and plant and equipment.

This study intends to investigate the measures taken during the design and construction stages with regard to the energy conservation and the operational performances of the high-rise office building projects. It also focus on the energy management processes in practice.

The energy efficient building codes and other national and international benchmarking tools are used to evaluate the design and operational performances.