

**MEASUREMENT OF BUILDING ENERGY INDEX FOR AN
OFFICE BUILDING AND PROPOSED ENERGY SAVINGS**

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ABSTRACT

This project presents the measurement of Building Energy Index (BEI) of an Industrial Training Institute, Kuala Lumpur. The historical energy data and the walkthrough audit determine the energy usage. From the result obtained, BEI is calculated and compared with Malaysian Standard MS 1525:2001 "Code of Practice on Energy Efficiency and use of Renewable Energy for Non-residential Buildings".

Energy savings Opportunities are identified from the results of Energy Audit. Energy Conservation Action can be taken from payback period calculated.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Energy Efficiency programs has been formally part of the national energy policy for the last decade. During 8th Malaysia Plan, the implementation of Energy Efficiency (EE) programs will focus on industrial and commercial sectors being the major consumers of energy. Measures to promote the efficient utilization of energy include the enforcement of the Energy Efficiency Regulation. The implementation of demand-side management will be intensified during the Plan period, which includes energy auditing, retrofitting and district cooling programs and changing the energy usage pattern.

The Malaysian Industrial Energy Efficiency Improvement Project (MIEEIP) is currently being carried out by Energy Audit in Government Buildings (EAGB) targeting the building sector. The main objective is to create awareness and disseminate relevant information regarding EE among the government organizations and aims at achieving the following objectives:

- To determine the baseline of current energy consumption in government buildings in Malaysia.
- To create awareness among the commercial sector especially government's offices/buildings on EE practice particularly through energy audit activities.
- To promote a sustainable EE program in the management of government buildings. [1]

Since buildings represent a large portion of energy consumption, about 30% to 40% of total consumptions, the potential for energy saving in buildings is significant. [2] There are several factors influencing the total energy consumption of buildings. They