

**MONITORING AND ANALYSIS OF ENERGY CONSUMPTION
ON JABATAN KASTAM DIRAJA PUTRAJAYA'S BUILDING**

**This report is presented in partial fulfilment for the award of the
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ABSTRACT

The objective of this research is to study the process involved in energy audit and analyze the energy consumption i.e. electricity and chilled water of a gas district cooling (GDC) plant at Pejabat Kastam Diraja Kompleks Kementerian Kewangan Putrajaya. In addition, it is also to conduct a cost benefit analysis and cost saving based on data collected. Energy audit is well-known in developed countries and it is a kind of inspection, survey and analysis of energy flows for energy conservation in a building, process or system to reduce the amount of energy input into the system without negative affecting the output. However, this study is only cover the electrical aspect in the energy assessment. The data is collected from the building control system (BCS) and the trend of the energy consumptions are analyzed using Microsoft Excel. From the trend, possible energy saving is identified.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The world is now facing many serious major problems concerning electrical energy sources such as lack of non-renewable energy source, inappropriate renewable energy use and energy generating process causing horrible side effects. Therefore, people and government must concern about energy efficiency, energy consumption and energy management in buildings. These factors are very important to minimize the energy costs, minimizing waste and minimizing environmental degradation. Energy audit is regarded as one of the comprehensive methods in checking the energy consumption and wastage in buildings[1]. Countries like United States and Australia are quite advance in this energy assessment. On the other hand, Malaysia is still in the early stage of its implementation.

Energy Audit is one of the key to a systematic approach to making decisions in the field of energy management. It is the best way to balance the input of total energy with their usage, and worked to identify all of the energy flow in a building. It quantifies energy consumption according to its discrete functions. Energy audit is an effective way in determining and pursuing a comprehensive energy management programs within a bussines. The definition of energy audits are also as verification, monitoring and analysis of energy consumption, including submission of technical report containing recommendations for improving energy efficiency with cost benefit analysis and an action plan to reduce energy consumption [2].