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BUILDING ENERGY PERFORMANCE ASSESSMENT OF SUSTAINABLE BUILDING IN MALAYSIA

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Abstract

This dissertation is to study on energy efficiency of sustainable office buildings in our country, Malaysia. The sustainable office building concept in our country is only in the introductory stage and experimental process. However, the government has spent lots of money and effort in implementing this building concept in order to support the global challenge in combating global warming. Other than that, by using less energy will cut down the operation cost of the building thus speeding up the payback period of the building. This will actually saves lot of money and is economic for the construction industry. Not only that, the country could spend less money on constructions of hydroelectric, electrical grids, and other high cost energy producing methods thus using less natural resources such as the gas, petroleum etc as these resources are deprived.

In this study, the objectives of this dissertation will be set first. The objective of this research paper is to focusing on the energy consumption of a floor of a building per metre square per annum by using a basic method of calculation.

In chapter 2 and 3, the introduction and details on sustainable building, office building and the energy status of our country are being explained based on the literature review or secondary data. . The two chapters are crucial as the chapter will give the reader a clear view on what's going on with the country's energy consumption, what types of resources are being use and why sustainable building concept are crucial in the construction industry today.

The depletion of natural resources and the effort in combating the global warming sure is a strong reason why the government is trying their best in experimenting with the sustainable or renewable energy method. But unfortunately, very few parties or designers or even builders are concerned with this matter.

Next, the detail of the case studies will be discussed in chapter 4. All three case studies, i.e, Menara Telekom, Low Energy Office Building of the Ministry of Energy, Water and Telecommunication and Menara Mesiniaga are described in detail in this chapter.

In chapter 5 the analysis of the data and data presentation will be discussed. In this chapter, the basic calculation of the data will be showed. Through the calculation of each case study, comparison will be done to find out the building with the lowest energy consumption.

Finally, in the final chapter, the conclusion and recommendation of the study is showed for future study on this topic.