

2011 International Conference on Green Buildings and Sustainable Cities

Greening government's office buildings: PWD Malaysia experiences

Yong Razidah Rashid^a, Mohd Sabere Sulaiman^{b*}, Azlina Aziz^c, Hilmilia Selamat^c, Abdul Halim Mat Yani^c, Mohd Zin Kandar^d

^aResearch Project Director Technical Representative, Public Works Department Malaysia (PWD) Architectural Branch, Menara Tun Ismail Mohamed Ali, Jalan Raja Laut, 50582 Kuala Lumpur, Malaysia

^bHead of Research Project, Public Works Department Malaysia (PWD) Architectural Branch, Menara Tun Ismail Mohamed Ali, Jalan Raja Laut, 50582 Kuala Lumpur, Malaysia

^cCo-Researcher, Public Works Department Malaysia (PWD) Architectural Branch, Menara Tun Ismail Mohamed Ali, Jalan Raja Laut, 50582 Kuala Lumpur, Malaysia

^d Head of Research Project, Faculty of Built Environment, 81310 Universiti Teknologi Malaysia, Johor, Malaysia.

Abstract

Tackling the challenge of climate change is about confronting the critical question of how we should value sustainability. The built environment is a reflection of our understanding through growing awareness of the solutions to issues that confront us. Public Works Department Malaysia (PWD) has taken steps progressively to create, adapt and apply a sustainable building project management throughout building lifecycle; planning, design, construction, monitoring and maintenance as to achieve a green nation by 2020. This approach focus on energy efficiency and energy saving in building sector thus in line with Malaysia's target to reduce carbon emission of 40% from 2005 level by 2020 as mentioned by Prime Minister of Malaysia at COP15 in Denmark, December 2009. Indeed, PWD has taken serious action significantly to lead this mission by implementing and achieving sustainable projects towards healthy and quality environment by using Green Building criteria to achieve sustainable building design. This aim is a collective approach from government agencies such as Ministry of Green, Technology and Water, Standard & Industrial Research Institute of Malaysia (SIRIM), Ministry of Natural Resources & Environment and Ministry of Housing & Local Authority with cooperation from the professional bodies namely Malaysian Institute of Architects and Association of Consultant Engineer Malaysia. The government has built several energy efficiency and green demonstration projects such as Low Energy Office (LEO), Green Energy Office (GEO) and Energy Commission Building. This paper outlines some of PWD experiences in implementing sustainable practices for government

* Corresponding author. Tel.: +60193528090; fax: +60326165217.

E-mail addresses: sabere@jkr.gov.my

buildings that particularly focus on office buildings. In line with the Malaysian Plan, PWD has produce its sustainable plan towards achieving the goals that focuses on green government building initiatives for new and existing buildings. The approach for new building includes of Energy Efficiency Programmes; that focus on designed, constructed or retrofitted, operated and maintained in a manner that reduces the use of energy. Other than that, Industrialised Building System, Rain Water Harvesting and Environmental Management System (JKR EMS 14001: 2004) are also considered. These criteria will be implemented into new government buildings design such as the future Ministry of Works Complex 2. For existing buildings, efforts has been done especially through energy audit on selected government buildings all over Malaysia, energy saving programmes, energy performance contract, and retrofitting works. In becoming a world class service provider, PWD also has embarked a way forward in implementing sustainable design and green project management through Research and Development. Currently, the research field focus on Developing a Comfortable and Energy Efficient Government's Office Building Design and the outcome will be a guideline for the designers. PWD Malaysia has put plans and strategies on energy efficiency and greening of government buildings that aims to improve the quality of life for the population.

© 2011 Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](#).

Selection and/or peer-review under responsibility of APAAS

Keywords: green building; green architecture; sustainable building; energy efficiency building

1. Introduction

Currently, the world is facing two main challenging issues which is climate change and energy security. These issues have to be solved through the collective and effective approach especially in regards with energy saving. The Green Technology Policy (GTP) that was launched in July 2009 by Prime Minister, Dato' Sri Mohd Najib bin Tun Haji Abdul Razak is one of the approach that purposely aims to increase the quality of life and better environment for the people. In achieving this national mission, buildings shall comply with all green design features that contribute to energy performance and simultaneously accomplish user comfort. This paper outlines the general scenario of government green office building in Malaysia focusing on the PWD experiences.

2. Malaysian Government Plans

Malaysia's contribution to the global fight against climate change is presented through its commitment to reduce 40% carbon emission per capita from 2005 level by 2020 as announced by the Prime Minister at the 15 Copenhagen Climate Change Summit, December 2009. The reduction anticipated would come from the energy, building, transportation and waste management sectors. Studies show that buildings consume about one third of the world's energy and therefore it is important to encourage buildings constructed, operated and maintained in a manner that reduce the energy. PWD Malaysia being the government technical implementing agency aims to lead sustainability in building sectors for the nation through its sustainable practices and formulation of guidelines.

3. Public Works Department Malaysia Experiences

3.1. Current implementation

PWD has implemented some initiatives through Energy Audit in various categories of government

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات