Energy, Environment and Sustainability of Green Buildings

Shamzani Affendy Mohd Din
Moustafa Anwar Moustafa
Muhammad Abu Eusuf

IIUM PRESS
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

ENERGY, ENVIRONMENT AND GREEN BUILDINGS

Editors
Shamzani Affendy Mohd Din
Moustafa Anwar Moustafa
Muhammad Abu Eusuf

INTERNATIONAL ISLAMIC UNIVERSITY OF MALAYSIA

Published by:
IIUM Press
International Islamic University Malaysia

First Edition, 2011

Perpustakaan Negara Malaysia Cataloguing-in-Publication Data

ISBN: 978-967-418-034-8

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM
(Malaysian Scholarly Publishing Council)

Printed by :
IIUM PRINTING SDN. BHD.
No. 1, Jalan Industri Batu Caves 1/3
Taman Perindustrian Batu Caves
Batu Caves Centre Point
68100 Batu Caves
Selangor Darul Ehsan

CONTENTS

SECTION 2: GREEN BUILDING PROJECTS

CHAPTER SEVEN - DR BYEN BUILDING IN COPENHAGEN-DENMARK

Shamzani Affendy Mohd Din & Soran Hama Aziz Ahmed

7.1 INTRODUCTION

Green buildings are part of a global response to increasing awareness of the role of human activity in causing global climate change. Buildings account for more than 40% of all global carbon dioxide emissions, one of the main culprits implicated in the phenomenon of global warming. There are other practical reasons for innovating with green buildings.

In many parts of the world, conflicts over energy and water resources are becoming common. Global warming threatens the water supplies of much of the world dependent on summer runoff from glaciers and high mountain snow packs for summer irrigation.

Green buildings also present a way to attack the inequity of global resource distribution by providing affordable housing for the poor that is healthier, more resource efficient and cheaper to own and operate. Already many architects, engineers and planners have responded to the disaster of Hurricane Katrina in 2005 by developing innovative housing designs that allow poor and lower middle-class people to have a healthy, attractive home, with lower utility costs and more good-prolong than conventional housing. Renewable energy systems using the ubiquitous solar and wind energy of the planet are powering many poor villages in the developing world, helping to provide education and healthcare in resource-poor environments.

Finally, green buildings are good for the environment. Features such as green roofs emphasize sensitivity to urban habitat preservation. Innovative onsite storm water management and the use of sustainably harvested wood and recycled-content materials help reduce the environmental and infrastructure effects of our current building methods.