SOLAR PANEL AS SOURCE OF RENEWABLE ENERGY IN RESIDENTIAL BUILDING:

(A case study in Venice of Perak, Lumut and Taman Dindings Ayer Tawar, Perak)

By

NUR IZZATI BINTI IBRAHIM
2010448648

Bachelor science of Architecture
Faculty of Architecture, Planning, and Surveying
Universiti Teknologi MARA

March – July 2014

ACKNOWLEDGEMENT

First and foremost, I would like to say Alhamdulilah to Allah S.W.T for giving me the strength, and health to complete this research paper. Secondly, I would like to acknowledge and extend my heartfelt gratitude to the following persons who have made the completion of this research possible:

Mr Sufian Bin Che Amat as the advisor for this vital encouragement and giving guidance, comments and suggestions in relation to the contents of this study and guide the operation of this research.

Asso. Prof. Ismail Bin Samsuddin as the coordinator of the desertion who has provided me significant information on current developments throughout the research and completion of this dissertation.

My studio mates, Archirocks Studio for the none ending support, sharing information, and completing this research together.

Not forgetting both my parents, Ibrahim Bin Abdullah Thani and Zuraina Binti Badri for their support, vitality, assistance and cooperation in completing this research.

Finally yet importantly, to those who are involve directly or indirectly in providing energy and ideas in completing this study.

TABLE OF CONTENTS

ABSTRACT

This research is an attempt to study solar panel as source of renewable energy in residential buildings. The idea is to do observation of solar panel install in each residential area to support the topic of the research. Observation must be made based on the location the houses, the position of solar panel installed, roof orientation, and the roof angle. Other than that, questionnaire is also distributed to know the level of solar energy usage and the causes that affect the usage of solar panel among the residence.

From the beginning of the research, it is shows that both residents did install solar energy at their house and they are aware on the existence of solar panel usage in Malaysia. There are some causes that prevent them to install solar energy technology such as affordability, inconvenient, awareness, and lack of trust in technology.

After the observation has been made, it shows that most the residence do not used it as the source of renewable energy because the overprice of the system. They does realize about the usage of solar panel in Malaysia but most of them could not able afford it.

CHAPTER ONE
INTRODUCTION

1.0 Introduction

Nowadays it is becoming increasingly clear that human activity is changing the global climate. Even though natural processes have contributed to global climate changes to some extent it is extremely unlikely that the scope of this changes during the last century could be solely attributed to natural factors. The problem is mainly caused by the energy resources we are predominately using. Solar energy is expected to play a major role in the future of electricity production.

1.1 Problem statement

Electrical power is an ideal kind of energy in that it can be easily supplied to the customer and converted into other kind of energy. Traditional means of burning fuel to generate power however is accompanied by chemical and radiation contamination that causes defect to the environment. Fossil Fuel provides the majority of the world's requirement.

Presently, Malaysia is well endowed with energy supply. Electricity generation is mostly fossil-based, which are natural gas and oil in particular which so far has been able to meet the country's demand for energy. Primary energy supply in 2000 was 50 658 kilotonnes of oil equivalent (ktoe) and it shows an increase to 54 194