

**ENT600****TECHNOLOGY BLUEPRINT**

**Group Name: Harvest Tech Company**

**Product: Air Conditioner Renewable Supply (ACRS)**

**Faculty: Electrical Engineering**

**Programme Code: EE242**

**Course: Bachelor of Engineering (Hons) Electrical**

**Group Members:**

- |  |            |
|--|------------|
| 1. Muhammad Ainul Imran Bin Mohd Fauzi | 2016309635 |
| 2. Muhammad Saifuddin Bin Mohd Pahlawi | 2016310145 |
| 3. Abd Rahman Auf Bin Samsudin         | 2016354301 |
| 4. Ahmad Daniel Haikal Bin Ahmad Nasir | 2016343299 |
| 5. Muhammad Afiq Bin Azhari            | 2016343603 |

**Class: EE2428B**

**Part: 8**

**Submitted To: Madam Noor Faizah Binti Mohd Lajin**

**Submission Date: 13/12/2019**



## ACKNOWLEDGEMENT

Alhamdulillah and praised to Allah S.W.T to give an opportunity to completed the Fundamental of Technology Entrepreneurship course work. Without the support from the unnamed inspires who encouraged us during our project, this course work couldn't have been accomplished within the prescribed time provided. This course work has been prepared and submitted as part of the requirement for the award of Degree in Electrical Engineering.

First of all, we wish to express our sincerest gratitude to University Technology Mara (UiTM) Pulau Pinang, particularly Department of Electrical Engineering for provide us an opportunity for undertaking this subject. Then, we have no word to express our gratitude to our lecture Madam Noor Faizah Binti Mohd Lajin for carry out all the valuable idea and suggestions to support our project development starting from beginning until the project is finished. Not forget to thank to our parent for providing financial, their love, prayers, caring and sacrifices for educating and preparing for our future. Next, I would like to say thanks to my team members for their commitment and ideas to finish this project.

Last but not least, we are thankful to our fellow friends, senior for their smart support idea and inspiration during the completion of the project

# TABLE OF CONTENTS

<b>Acknowledgement</b>	<b>ii</b>
<b>Table of Contents</b>	<b>iii</b>
<b>List of Figures</b>	<b>v</b>
<b>List of Table</b>	<b>vi</b>
<b>Exercutive Summary</b>	<b>vii</b>
<b>CHAPTER ONE PRODUCTION DESCRIPTION</b>	<b>1</b>
1.1 Description of Product	1
1.2 Application of the Product	1
1.3 Product Features	1
1.4 Image and Development of the Product	2
1.5 Intellectual Property of the Product	3
1.6 Opportunities for the Product Expansion	3
<b>CHAPTER TWO TECHNOLOGY DESCRIPTION</b>	<b>4</b>
<b>CHAPTER THREE MARKET ANALYSIS AND STRATEGIES</b>	<b>5</b>
3.1 CUSTOMERS	5
3.2 MARKET TREND AND SIZE	5
3.3 COMPETITION AND COMPETITIVE EDGES	7
3.4 Estimate Market Share and Trend	9
3.5 Marketing Strategy	10
<b>CHAPTER FOUR MANAGEMENT TEAM</b>	<b>13</b>
4.1 ORGANIZATION	13
4.2 Management Personnel	14
4.3 Duties and Responsibilities	16
4.4 Management Compensation and Ownership	18
4.5 Supporting Professional Advisors and Services	19

## EXECUTIVE SUMMARY

Harvest Tech Company is a company that has done some innovation to the current product. The goal of this company is to generate or supply an electrical energy by harvesting the energy from another source that can generate electricity. The concept of our company use is renewable energy and green technology. Air Conditioner Renewable Supply (ACRS) is the first new innovation of our company that has been inspired from the windmill system. This product was an extension of the current product which is air conditioner. ACRS is a product that will attach at the outdoor unit of the air conditioner. This product will harvest the wind energy that has been produced by the outdoor unit of the air conditioner. The electrical energy produced by using the windmill system. This electrical energy will be stored in the battery storage. This energy can be used back by the user or consumer to light up their house or office if and incident occur such as blackout.

The target market of our product is for the user of the air conditioner around Shah Alam. This is because the product needs an outdoor unit of air conditioner to harvest the wind energy in order to produce the electrical energy. This product is very useful because it can be as a backup supply when an incident such as blackout occurs. This product can help to light up the house when blackout occurs. Throughout the concept testing we had done, we found that the existing product does not use the wind energy that has been generated from the outdoor unit of the air conditioner. Besides that, through this concept testing, we also have identified our target market by frequent use of the air conditioner. Moreover, by this additional product that attached to the outdoor unit of the air conditioner, it will help to solve the problem faced by the customer when blackout occurs. The market price of the product is also affordable for everyone that use the air conditioner and give some advantage to them.

The ACRS is a new product that has been innovated by our company. However, there are none of our competitors that combining these two important things together which give an advantage and add some feature to the product. With this combination of air conditioner system and windmill system it gives advantages to our company throughout the market. Our company can widely get a huge market because we are combining two products in one price. Our product is a quality product and consists of many features that can solve the user or consumer problem. Our company believes, from these functions and quality product provided from the



# CHAPTER ONE

## PRODUCTION DESCRIPTION

### 1.1 Description of Product

Air conditioner renewable supply (ACRS) is new innovation in harvesting energy. This product is the extension of the current product which is air conditioner. This product is able to generate and supply electricity to the consumer. This product will use the wind that has been produced from the outdoor unit of the air conditioner to generate electricity. This was performed by using the concept of windmill. The electrical energy produced will be stored in the battery storage. Therefore, the consumer can use the electrical energy when needed such as during the incident of the blackout.

### 1.2 Application of the Product

ACRS designed to generate an electrical energy from the outdoor unit of the air conditioner that can be use by the consumer. The energy produced can be use by the consumer when there is an incident occur such as blackout. This can reduce the chances of the fire cases that has been caused by the candle when blackout occurs. This product can be use to light up the lamp, emergency lamp, aquarium or other equipment that required a small power during blackout. Other than that, this product also can reduce the monthly electrical bill. This can be done when the air conditioner was working in the daylight and produce the electrical energy that will be stored in the battery storage. The energy stored in the battery can be used at the night to light up some light at the office or houses. By this technique it can reduce the usage of the electricity supplied and in the same time it reduces the electrical bill.

### 1.3 Product Features

- Backup electrical supply
- Reduce the monthly electrical bills

The difference of our product with the current product which is air conditioner is the