FINAL YEAR PROJECT REPORT

EFFICIENT SOLAR TRACKING

Submitted By

SHARJEEL FAROOQ 101519141

IJLAL MUJTABA 101519146

HASEEB SAEED 101519148

DEPARTMENT OF ELECTRICAL ENGINEERING

SCHOOL OF ENGINEERING

UNIVERSITY OF MANAGEMENT AND TECHNOLOGY

SEPTEMBER 2014

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EFFICIENT SOLAR TRACKING

A PROJECT REPORT

Submitted by

SHARJEEL FAROOQ 101519141

IJLAL MUJTABA 101519146

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in partial fulfillment of the requirements for the award of degree of

BACHELOR OF SCIENCE
IN
ELECTRICAL ENGINEERING

APPROVED

Project Advisor_____ Director Projects _____

DEPARTMENT OF ELECTRICAL ENGINEERING

SCHOOL OF ENGINEERING

UNIVERSITY OF MANAGEMENT AND TECHNOLOGY

SEPTEMBER 2014

University of Management & Technology
School of Engineering
Department of Electrical Engineering

Senior Year Project- I Evaluation

Project ID 19 Date _____

Project Title: Efficent solar tracking

Particulars of the Students

Code	ID	Name	Semester in which Registered	Contact Number
A	10154-148	M. Haseeb Saeed		
B	141	Sharjeel		
C	146	Ijlal		
D				

S.No	Topic	Max Marks	Obtained Marks
1	Problem Statement	10	
2	Objective/Scope	10	
3	Methodology	10	
4	Scope of the Project/Utilization	10	
5	Literature Review/Data collection	10	
6	Design and Analysis	10	
7	Expected Output/Outcome/Final Deliverable	10	
8	Conclusion and Recommendation	10	
9	FYP-1 Documentation	20	

232/300 x 20 = 15.5

Suggested Changes	
	(1) 500W inverter pure sine wave (2) single axis but provision of manual vertical adjustment (3) Motor

Name Role: (adviser/member) Signature:_____

Gantt Chart


PROJECT PLANNER
WEEK OF
TASK
FP-1
Decide Topic Of Interest
Literature Review
Write Abstract and prepare presentation
Decide on specific project idea
Write proposal and prepare presentation
Making Project Planner
Availability of project resources
Research on project requirement
Create initial test data
Verification of simulation data from advisor
FP-2
Progress review meeting with advisor
Revise plan for FP-2
All experimental/practical/computational work to be completed
Complete draft report and submit to advisor
Perform final tests and analysis
Defense of the project FP-2
Project exhibition
Combine Work
101519141 Sharjeel Farooq
101519146 Ijlal Mujtaba
101519148 Haseeb Saeed
9\2
9\3
9\4
10\1
10\2
10\3
10\4
11\1
11\2
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12\1
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12\4
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2\2
2\3
3\1
3\2
3\4
4\1
4\2
4\3
4\4
5\1
5\2
5\4
Advisor Signature
4/12/13

Declaration of Originality

We hereby declare that this submission is our own work. To the best of our knowledge it includes no materials formerly published or written by another person or considerable proportions of material which have been accepted for the award of any other degree or any other educational institution apart from where due acknowledgement is made in the report. Any input made to the research by others with whom I have worked at University of Management and Technology or elsewhere, is explicitly acknowledged in the report. We also declare that the rational content of this report is the product of our own work except to the extents that help from others in the project design and beginning or in style, presentation and linguistic expression is acknowledged.

Sharjeel Farooq ……

Ijlal Mujtaba……..……

M. Haseeb Saeed……

Muhammad Haris (Project Advisor)……

Date ……

Acknowledgement

We would like to thank a great many people who helped and supported us in the completion of this project and helped us to take this project till the end successfully.

Our sincerest thanks to Sir, **Muhammad Haris** who helped us in every way for successful completion of our project and guiding us thoroughly throughout this process and correcting various documents related to our project. He got through the trouble of personally go through the project and make necessary corrections.

We express our gratitude to the Director of Projects, Khan M Nazir for extending his support.

Our deepest recognition to Dr. Naveed CEO, PV Silicon Technologies (Pvt) Ltd. 8Km,Raiwand Road, Bhubtian, Lahore for support and guidance and for providing us a lot of information before we started working for the project.

We would also like to thank our faculty members and Institution without whom this project would have never been completed. We also want to express our honest praise to our family and friends and our well-wishers.

Abstract

The demand for an alternative source of energy has increased extensively in the past few years. There is a need for development of such systems that can efficiently utilize the renewable energy resources. That is why it is very important for us to discover the ways in which this unlimited renewable energy can be used productively. Solar panels are one of the best sources that are used to convert the unlimited supply of sun's energy into useful energy. Our project is comprised of simulations design and construction of such a system that rotates the panels to follow the sun in order to improve the efficiency of the power generated by the Solar panels. The improvement in the efficiency of the power generated will be accomplished by the law that the solar panels to follow the sun throughout the day in a way that the sun rays strike the panels perpendicular to the surface of the panel. The system includes light dependent resistors as sensors, microcontroller, a low rpm motor along with buck boost converter and an inverter. Our tracking system improves 25-30% efficiency of the power generated in comparison to that of a fixed solar panel system.

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