

FINAL YEAR PROJECT REPORT

EFFICIENT SOLAR TRACKING



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DEPARTMENT OF ELECTRICAL ENGINEERING

SCHOOL OF ENGINEERING

UNIVERSITY OF MANAGEMENT AND TECHNOLOGY

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A PROJECT REPORT

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**BACHELOR OF SCIENCE
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APPROVED



Project Advisor _____ Director Projects _____

DEPARTMENT OF ELECTRICAL ENGINEERING

SCHOOL OF ENGINEERING

UNIVERSITY OF MANAGEMENT AND TECHNOLOGY

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	University of Management & Technology School of Engineering Department of Electrical Engineering Senior Year Project- I Evaluation	
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Project ID 19 Date _____

Project Title: Efficient solar tracking

Particulars of the Students

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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	
		$\frac{232}{300} \times 100 = 15.5$	15.5

Suggested Changes	<p>① 500W inverter pure sine wave</p> <p>② Single single axis but not provision of manual vertical adjustment.</p> <p>③ Motor</p>
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Name _____ Role: (adviser/member) Signature: _____

Gantt Chart



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.

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Muhammad Haris (Project Advisor).....

Date

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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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