

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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**K.L.E COLLEGE OF ENGINEERING AND TECHNOLOGY
CHIKODI- 591201, KARNATAKA**



A Project Report on

**“POWER GENERATION THROUGH WIND –PHOTO VOLATIC HYBRID
SYSTEM WITH BATTERY STORAGE FOR LABORATORY GENERAL
IILLUMINATION FOR COLLEGE PURPOSES”**

A Dissertation work Submitted in partial fulfillment for the award of the degree of

**Bachelor of Engineering
In
Mechanical Engineering**

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1. INTRODUCTION

Since Finite Fossil Fuels On The Earth Have Been Continue Consumed For Several Hundreds Of Years And They Have Been Rapidly Decreased In Recent Years, So We Realize The Importance Of Renewable Energy Development, And Utilization Of Such Important Energy. Wind Energy With High- Power Density Is An Important Renewable Energy Having Highly Cost Effective Characteristics. Wind And Photovoltaic Energy Holds The Most Potential To Meet Our Energy Demands. Alone, Wind Energy Is Capable Of Supplying Large Amounts Of Power But Its Presence Is Highly Unpredictable As It Can Be Here One Moment And Gone In Another. Similarly, Solar Energy Is Present Throughout The Day But The Solar Irradiation Levels Vary Due To Sun Intensity And Unpredictable Shadows Cast By Clouds, Birds, Trees, Etc The Common Inherent Drawback Of Wind And Photovoltaic Systems Are Their Intermittent Natures That Make Them Unreliable.

The use of alternative energy sources is gaining popularity worldwide, with a lot of interest in particular being shown in efficiently harnessing wind energy and solar energy. One of the biggest hurdles in using these alternative energy sources is their lack of consistency in terms of their inability to deliver a fixed power supply. Like many other alternative energy sources, solar energy is also subject to this problem. This is due to the fact that solar irradiation, only available during the daytime, is hardly constant even then due to the movement of the sun and possible cloud cover. Seasonal changes in solar irradiation also cause variability. If we can reduce the variation in the power supply from solar sources, then we come a step closer to making solar power generation viable on a massive scale.

2. OBJECTIVES

1. To generate power Through Wind-Photovoltaic Hybrid Power System with Battery Storage for Laboratory General Illumination for College Purposes”.
2. To retrofit to existing diesel-generator systems with the hybrid system to save on high fuel costs and minimize noise.
3. To Integrate Solar and Wind Technology into electrical system will result in higher efficiency, easier maintenance and increased reliability.