

VISVESVARAYA TECHNOLOGICAL UNIVERSITY  
"JNANA SANGAMA", BELGAUM-590014  
KARNATAKA



Project Report On:

**"HYBRID POWER GENERATION USING SOLAR AND WIND  
ENERGY"**

Submitted in partial fulfilment of the requirements of the award of degree  
BACHELOR OF ENGINEERING  
IN  
ELECTRICAL & ELECTRONICS ENGINEERING

**SUBMITTED BY:**

ASHWINI	[1SV19EE002]
MANJULA K T	[1SV19EE005]
NANDAN HIREMATH	[1SV19EE009]
PUSHPA M T	[1SV19EE013]

**UNDER THE GUIDENCE:**

Mrs.UMABAI M.E

Asst. Prof. Dept of EEE



Sri Shridevi Charitable Trust (R.)  
**SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(Recognised by Govt. of Karnataka, Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)  
Sri Road, Tumkur - 572 106, Karnataka | Website: [www.shrideviengineering.org](http://www.shrideviengineering.org)



2022-2023

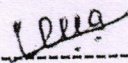
*Nandana Hiremath*  
PRINCIPAL  
SIE.TUMKUR.

Scanned with ACE Scanner

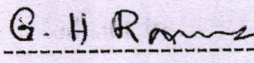
DEPARTMENT OF ELECTRICAL AND ELECTRONICS  
ENGINEERING

CERTIFICATE

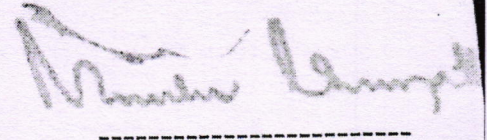
is to certify that the project work entitled "HYBRID POWER GENERATION USING SOLAR AND WIND ENERGY" has been successfully carried out by ASHWINI (ISV19EE002) MANJULA K T (ISV19EE005) NANDAN HIREMATH (ISV19EE009) PUSHPA M T (ISV19EE013) the bonafide student of SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-572106, in partial fulfillment for the award of degree Bachelor of Engineering in ELECTRICAL & ELECTRONICS ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY JNANA SANGAMA, BANGALORE-560014 during the year 2022-2023. All the corrections suggestions indicated for internal assessments have been incorporated in the report. The project work has been approved as it satisfies the academic requirements in respect to the technical seminar prescribed for the said Degree.

  
-----  
Signature of the Guide

Mrs. UMABAI M.E  
Asst.prof. Dept of EEE  
SIET, Tumkur

  
-----  
Signature of the HOD

Mr. G H RAVIKUMAR M.Tech (Ph. D)  
HOD Dept of EEE  
SIET, Tumkur

  
-----  
Signature of the Principal

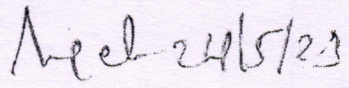
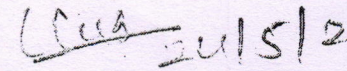
NARENDRA VISHWANATH Ph. D  
SIET, Tumkur

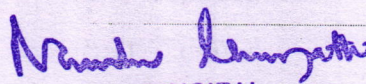
External Viva

Name of the Examiners:

1. Syeda Arefunnisa
2. Umabai

Signature with date

  
PRINCIPAL  
SIET, TUMKUR.

## ABSTRACT

Energy is critical to the economic growth and social development of any country. Indigenous energy resources need to be developed to the optimum level to minimize dependence on imported fuels, subject to resolving economic, environmental and social constraints. This led to a boost in research and development as well as investment in renewable energy industry in search of ways to meet energy demand and to reduce dependency on fossil fuels. Wind and solar energy are becoming popular owing to abundance, availability and ease of harnessing for electrical power generation. This paper focuses on an integrated hybrid renewable energy system consisting of wind and solar energy many parts of the country have potential to developed economic power generation in Libya. Through maps locations were identified where both wind and solar potential is high. The focal point of this paper is to propose and evaluate a wind-solar hybrid power generation system for a selected location. Grid tied power generation systems make use of solar PV or wind turbines to produce electricity and supply the load by connecting to grid. In this study, HOMER (Hybrid Optimization Model for Electric Renewable) computer modeling software was used to model the power system, its physical behavior and its life cycle cost. computer modeling software was used to model the power system, its physical behavior and its life cycle cost.

  
PRINCIPAL  
SIET, TUMKUR.