

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAUM**



A PROJECT REPORT ON
**“HYBRID POWER GENERATION UNDER LOCAL
CLIMATIC CONDITION FOR ENERGY INDEPENDENCE”**

(SPONSORED BY KSCST, BANGALORE)

Submitted in partial fulfillment for the award of Bachelor of Engineering in

MECHANICAL ENGINEERING

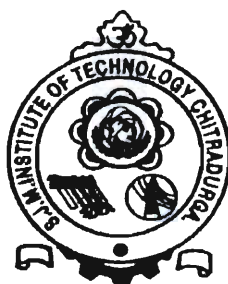
of Visvesvaraya Technological University, Belgaum during the year 2010-11

Under the guidance of:

Sri .A.M.RAJESH M.Tech
Lecturer

PROJECT ASSOCIATES:

<i>Name of the student</i>	<i>University Seat Number</i>
BALAJI.S.R	4SM07ME010
GHANASHYAM.K.G	4SM07ME017
MANJUNATH.S	4SM07ME027
SUBRAHMANYA.V	4SM07ME046



DEPARTMENT OF MECHANICAL ENGINEERING

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S.J.M. INSTITUTE OF TECHNOLOGY

(Affiliated to VTU, Belgaum & Recognized by AICTE, New Delhi)

P. B. No. 73, NH-4 Bye-Pass Road, **CHITRADURGA-577502**

Karnataka state, INDIA

ABSTRACT

Standalone wind with Solar Photovoltaic is known as the best hybrid Combination of all renewable energy systems and suitable for most of the applications taking care of seasonal changes. They also compliment each other during lean periods, example additional energy production by wind during monsoon months compensate less output generated by solar. Similarly, post winter months when wind is dull, SPV takes over. The hybrid system provides more consistent year-round renewable energy production. These systems are modular and can be expanded easily. A hybrid renewable energy system utilizes two or more energy production methods, usually solar and wind power. Hybrid wind & solar systems provide more consistent year-round performance and reduce the need for back-up generation. The major advantage of solar / wind hybrid system is that when solar and wind power production is used together, the reliability of the system is enhanced. Additionally, the size of battery storage can be reduced as there is less reliance on one method of power production. Often, when there is no sun, there is plenty of wind. The packaged systems are ideally suited to remote homes, schools, clinics and other off-grid applications. They can also be retrofitted to existing diesel –generator systems to save on high fuel costs, minimize noise and provide up to 24-hour power. The standard hybrid systems available to meet power needs. We can also tailor a system to suit should you have a smaller or larger power requirement.