

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“JNANASANGAMA” BELGAUM-590014

KARNATAKA



PROJECT REPORT

ON

“RENEWABLE ENERGY RESOURCES FOR RESIDENTIAL APPLICATIONS NEAR COASTAL AREAS”

(Sponsored by KSCST, IISC, Bangalore)

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE

BACHELOR OF ENGINEERING

IN

Electronics and communication

Submitted by:

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ABSTRACT

Most coastal areas are experiencing relatively large quantum of solar and wind energy. If the wind is heavy it might produce larger sea waves of high energy contents. The electricity needs of a township or a village situated in a coastal area can be partially fulfilled by installing a modular mini electricity generating unit and an intensified solar heat extractor in buildings. Also, installation of medium sized windmill plant, solar heated steam turbine electricity generator and sea wave energy extracting plants could fulfill the rest of the electricity needs of the township. This approach leads self sufficiency in electricity and provides pollution free electrical energy to the consumers.

Solar power, a renewable energy source, refers to the capture and conversion of solar radiation (that is, sunlight) into electricity or heat. The use of solar power to generate electricity most commonly involves photovoltaic (PV) modules, or “solar panels,” that are installed in large solar power plants or on the walls or roofs of buildings.

Tidal power, also called tidal energy, is a form of hydropower that converts the energy of tides into useful forms of power - mainly electricity. Although not yet widely used, tidal power has potential for future electricity generation. Tides are more predictable than wind energy and solar power. Among sources of renewable energy, tidal power has traditionally suffered from relatively high cost and limited availability of sites with sufficiently high tidal ranges or flow velocities, thus constricting its total availability.