MAXIMUM EFFICIENCY POWER GENERATION USING RENEWABLE ENERGY SOURCES

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A Project Report
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ABSTRACT

The renewable energy resources are available free of cost in nature & also available in abundance. Majority of the population in our country is located in the village and a large number of villages are still not served with uninterrupted power supply. Conventional sources of energy have a generation period, depend heavily on exhaustible deposits and adversely affect the ecological balance.

New and renewable sources of energy are not only economical fair but do not suffer from any of the disadvantages. These can be used to generate power in rural areas as there will be power cut in these areas during day time. Due to scarcity of rainfall & coal both thermal & hydro electric power plants cannot produce power as per demand & usually to supply load demands of urban areas the heavy load shedding is carried in rural areas. So the project mainly aims to generate power using hydro, wind & solar & this can be easily implemented in the rural areas to get uninterrupted power supply and fulfill the load demand for the domestic applications. But for high power generation it is very difficult to integrate solar, wind & hydro systems hence power generated cannot be fed to the power grid.

It can be also used in the farms to pump water and to irrigate the field. The project is unique because on failure of availability of one of the energy the other types can be utilized to generate power i.e. in summer season solar energy can be used, in rainy season on non availability of solar energy, generation using hydro or wind energy can be adopted.