

“Electricity: The Backbone of Modern Era”

I am a village girl from a northern state of India and now have been shifted temporarily to Bangalore with parents on their transfer. Since I belong to a well-developed state of India, basic facilities like electricity, road, and education, medical and other infrastructural amenities were easily available in my locality.

My father is a government servant, having transferable job. He is being transferred periodically in accordance with his departmental rules and regulations. His transfers have become the source of knowledge for me about the geographical structure of India. I have visited many Indian states and learnt a lot about socio-geographic structure of my country. Natural resources like fertile farms, irrigation resources, pollution standard, water resources etc play a vital role in the life style of people. Poorly managed states forced their people to live in dark even in 21st century. In India 65% of population resides in villages. The villages get only 25% power supply of their need. Hence the villagers are who suffer the most. Most of the villages are either out of reach of electricity or get electricity with extreme power cuts. The scarcity of electricity in villages leads to keep them away from informed with latest happening in world and basic needs like internet, health, education and entertainment. In this competitive age, it is a curse for the talents living in far furlong villages.

The reason behind the deficiency of electricity in villages is the limited resources, utilization of obsoletest technology and insufficient infrastructure. The resources like coal, gas, petroleum product utilized for power generation are either in small stock or costlier. The production cost, using as fuel resources, is so high that people are not able to reimburse.

The needs of hour is to search for long lasting, low budget, pollution free resources of electricity (light) which can be made available to every underprivileged. India is rich of mountains and hills,

which are the prime causes of rain. Like-wise India has huge numbers of rivers, whose water is unmanaged and linked to sea for dispose of water during rainy season. One of the cost effective methods for power generation can be hydro power generation. The states like Bihar, Jharkhand and Madhya Pradesh have sufficient water falls/dams and rainfalls for four to five during the year, in their localities. Hydropower generation is a clean , renewable and reliable energy source which converts kinetics energy from falling water into electricity, without consuming more water than is produced by nature. It is quite simple and oldest method by which renewable energy has been harnessed by human race. The potential energy stored in a body of water held at a given height is converted to kinetic (movement energy) which is used to turn a turbine and rotation of turbines at a required speed creates electricity. The mechanical energy is derived from by directing, harnessing or channeling moving water. The amount of available energy in moving water is determined by its flow or fall. To increase the force of moving water, impoundments or dams are used to raise the water level, creating a hydraulic head or height differential. When water behind dam is released, it runs through a pipe called a penstock and is delivered on the propellers of turbines.

Hydro power generation can also be done without making dams over rivers. The fast moving river water can be diverted at waterfalls made for power generations where the turbines are placed. The power generation station in Jammu and Kashmir is an example of this. Another run-of-the river design uses a traditional water wheel on a floating platform to capture kinetic force of moving force of the fast moving rivers. This approach is inexpensive and easy to implement. Of course it does not produce much of electricity. During floods, the intake system is helped by a spillway. A spillway is way which allows water to flow directly into river or other water body below dam, bypassing tunnels, turbines and generators.

Dream of light in everyone's life can come true with the suggested ibid methods. The rural people escaped from the latest happening in world, education, health and entertainment. These can be

ensured if the light reaches to them. Living with light will provide the villagers a better living standard. More and more development activities like small scale factories will provide them job opportunities.

Natural resources like waterfalls, wind blow at sea shores and garbage management can be proved to be god's gift if they are utilized truly and rightfully. The nature has provided us everything what we need. Let's keep continue the nature's balance with science and technology enhancement so that we and our coming generations can continue enjoy the benefits of natural resources without further destroying them.