Research on renewable energy at DU

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RENEWABLE energy (Non-Conventional Energy) is defined as energy derived from resources that are regenerative or for all practical purposes cannot be depleted. Sources of renewable energy contribute approximately 25% of human energy use worldwide. The prime source of renewable energy is solar radiation, i.e. sunlight.

Mankind's traditional use of wind, water, and solar power are widespread in developed and developing countries; but the mass production of electricity using renewable energy sources has become commonplace only recently, reflecting the major threats of climate change due to pollution, exhaustion of fossil fuels, and the environmental, social and political risks of fossil fuels and nuclear power.

There are different kinds of renewable energy sources. Some of them are solar energy, Biomass, Wind energy, Small hydro, Geothermal, Solar thermal energy, Marine renewable energy resources and Waste to energy. In Bangladesh Solar, wind, hydro and biomass are used most frequently.

There is a place In Dhaka University where research on renewable energy is conducted, known as Renewable Energy Research Centre (RERC). It was established in 1980. This centre mainly works on Solar and Wind energy. It's the only centre in Bangladesh where solar radiation is measured with automatic computerized system every minute. They have their own Energy Park, which is open for all, in front of their research centre. A number of solar panel, solar hot water system, solar dryer, solar cooker and water pumping systems have been placed there. Usually students of Physics, Applied Physics, Chemistry, Applied chemistry, Botany, Zoology and Fisheries departments do their higher research studies like M.Phil or P.hD in this Centre. Researchers accept projects on related topics, and after completion of their projects submit a thesis paper. Every year there are a number of university funded projects as well as foreign funded projects.

The Renewable Energy Research Centre (RERC) has the following aims and objectives:

i) To organize research activities in the field of Solar, wind and other alternative sources of energy.

ii) To encourage research projects for utilization of solar energy in Bangladesh.

iii) To help multidisciplinary research activities in this field.

iv) To look for international assistance and collaborations in this field.

v) To co-ordinate and establish liaison with scientists and engineers working in other institutions in the country or abroad.

vi) To collect information and literature on research in the fields of solar and other alternative energy sources and to disseminate them among the research workers.

Other regular activities of this research centre are to suggest on whether it is financially and technically feasible to install a solar system or a solar wind/solar diesel hybrid system. This choice is mostly dependent on which resource is more available to a particular area. For instance, in coastal areas, which renewable energy is feasible: solar or wind?

The weather forecasting division of the Government of Bangladesh, through support logging system, manually measures the solar radiation of a particular area. But they do this for only 7 locations. These are Bogra, Sylhet, Dinajpur, Chuadanga, Dhaka, Satkhira and Rangamati. They only measure radiations in these seven places and, based on these, provide estimated data for the other districts.