Intense R&D needed to establish India a Global Leader in Solar Energy: Dr. Farooq Abdullah

THREE NEW FACILITIES INITIATED AT SOLAR ENERGY CENTRE

The Jawhar Lal Nehru National Solar Mission announced recently by Government of India targets 20,000 MW grid solar power, 2,000 MW off grid solar applications and 20 million sq meters of solar thermal collectors by the year 2022, the end of the thirteenth plan period. The National Solar Mission will formally be launched by Prime Minister Dr. Manmohan Singh in the Solar Energy Conclave 2010 to be held on 11th January, 2010 at Vigyan Bhawan in New Delhi.

India has very good solar insolation with large parts of the country having more than 1800kWh/m2/year insolation and 300 days of sunshine. For development of reliable and cost effective solar energy technologies, the Solar Energy Centre of the Ministry of New and Renewable Energy has for many years been working on various aspects of solar resource utilization and technology development.

Today, on the eve of this important development, under a new initiative of academia-industry-government partnership, Dr. Farooq Abdullah, Union minister of New and Renewable Energy laid the foundation stone for three more technical facilities in the R&D campus of the Solar Energy Centre situated on the Gurgaon-Faridabad Road just on the outskirts of the national capital. Speaking on the accasion, he emphasized the need of such intense indigenous research and development in the area to establish India as a global leader in solar energy.

Shri Deepak Gupta, secretary Ministry of New and Renewable Energy was also present on the occasion.

These facilities initiated today include the Solar Thermal Testing, Research and Simulation facility being developed by a consortium led by Indian Institute of Technology Bombay. The facility would have a grid connected solar thermal power plant of 1 MW capacity. This will also include a test set up that enables companies and research institutions to test the performance of different solar concentrator options, coatings and materials, components and systems for a solar thermal power plant. In addition, the IIT Bombay led consortium is also developing a solar power plant simulator that simulates the performance of the actual solar thermal plant through component and system models based on appropriate mathematical equations. The consortium members of this unique facility include Tata Power, Tata Consulting Engineers, Larsen & Toubro, Clique, KIE Solatherm and Solar Energy Centre.

The second facility is a pilot project based on an indigenously developed solar concentrator technology that promises delivering low cost thermal energy. Megawatt Solutions, a Chennai-based company has partnered with Solar Energy Center to demonstrate technical and commercial viability of the technology that can harness solar energy through the thermal route for various applications like industrial process heating, air-conditioning and power generation.

The consortiums in both these pilot projects for development of solar thermal energy represent a new model for academia, industry and government partnership for technology development and research.

Reliable and cost effective photovoltaic (PV) modules and robust engineering of a PV system are extremely important for widespread utilization of solar PV technology. Today Minister Dr Abdullah also laid the foundation stone of a 20 kW solar photovoltaic power plant for

validation of various design configurations. The configurations of the plant have been designed by the Centre and is being installed by Solar Semiconductor Private limited with power conditioning units supplied by Optimal Power Synergy India. The PV module reliability R&D facility of the Centre has recently been expanded and enhanced through a cooperative research project with the National Institute of Advanced Industrial Science and Technology (AIST) Japan. The facility works on long term performance evaluation of different technology PV modules to determine module life times, expected degradation or failure rates through testing under actual field conditions.

Shri Deepak Gupta, secretary of MNRE, stated that the efforts of the Solar Energy Centre are well in line with the objectives of the National Solar Mission that envisages setting up Centres of Excellence in the country for solar energy research.