

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
RAJYA SABHA
QUESTION NO 06.12.2010
ANSWERED ON
UTILISATION OF SOLAR ENERGY .

380

Shri N. Balaganga

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state :-

- (a) what is the maximum potential of solar energy in the country;
- (b) the percentage of its utilization;
- (c) whether the percentage of utilization is low; and
- (d) if so, the measures taken by Government to make it popular among the citizens?

ANSWER

THE MINISTER OF NEW AND RENEWABLE ENERGY

(Dr. FAROOQ ABDULLAH)

(a),(b),(c)&(d):A statement is laid on the Table of the House.

Statement referred to in reply to Parts (a),(b),(c)&(d) of the Rajya Sabha Starred Question No. 380 for 6th December 2010

(a),(b)&(c):India receives solar energy equivalent to over 5,000 trillion kWh per year. The daily average solar energy incident over India varies from 4-7 kWh per square meter depending upon the location. Solar energy can be harnessed through two routes, namely solar photovoltaic (PV) and solar thermal by direct conversion to electricity and heat energy respectively.

The utilization of solar energy in the country has been regularly increasing. However, the high initial cost of the solar energy systems is a barrier to its large-scale utilization. The estimated unit cost of electricity from grid connected solar power plants is estimated to be around ` 11-15 per unit, which is very high compared to electricity generated from conventional sources including thermal power and other renewable energy sources such as wind, small hydro and biomass.

In view of the high initial cost, during the last several years the solar energy systems have mainly been used for stand-alone applications such as lighting, telecommunication, small power requirements, battery charging, water heating and cooking etc. So far around 2 million solar photovoltaic systems aggregating to about 118 Megawatt peak solar photovoltaic module capacity have been installed in the country. In addition about 0.66 million solar cookers and about 3.77 million square metre collector area have been installed under solar thermal applications, mainly for solar water heating, which is equivalent to about 2600 Megawatt thermal energy capacity. A total of 18 Megawatt peak (MWp) of grid connected solar power plants have also been installed in the country. In addition 11,127 remote villages/hamlets have been covered with solar lighting systems.

(d):The Government has launched in January, 2010 the Jawaharlal Nehru National Solar Mission to develop solar energy technologies to make solar power competitive to conventional grid power by 2022. The Mission aims at setting up of 20,000 MW grid solar power and 2,000 MW of off-grid solar applications including 20 million solar lights. In addition, it aims at installation of 20 million square metre solar thermal collector area by 2022. The Mission will be implemented in three phases. Government has approved the target to set up 1100 MW grid connected solar plants, including 100 MW capacity plants as rooftop and small solar plants for the first phase of the Mission till March, 2013. The projects are to be set up on build, own and operate basis, involving the private and public sector. Another 200 MW capacity off-grid solar applications will also be supported in the first phase of the Mission. In addition, installation of 7 million square metre collector area is also targeted under solar thermal applications by March, 2013.