

Shortfall in renewable electricity generation

3273. SHRI N.K. SINGH:

SHRIMATI SHOBHANA BHARTIA:

SHRI MAHENDRA MOHAN:

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

(a) whether Government is aware that the renewable energy contributes only about four per cent of power generation in the country, at present;

(b) whether the targets of generating electricity from renewable sources during the last three years have been achieved;

(c) if so, the details thereof;

(d) if not, the factors responsible for slow growth in renewable electricity generation; and

(e) the steps taken by Government to promote electricity generation from renewable sources?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) A cumulative grid-interactive power generation installed capacity of around 14,772 MW and off-grid/captive power capacity of around 374 MW from various renewable energy sources mainly wind, small hydro, biomass and solar energy has been set up as on 30.06.2009. This corresponds to about 9 per cent of the total power generation installed capacity from all sources in the country. Contribution to energy mix is estimated at around 3%. In addition, a large number of decentralized renewable energy systems/devices, such as, biogas plants, solar photovoltaic systems, solar cookers, solar water heating systems, wind pumps have also been deployed throughout the country. Even though their contribution to energy-mix is low, the decentralized and distributed nature of the renewable energy systems is providing many socio-economic benefits.

(b) and (c) Yes, Sir. Around 6,367 MW grid-interactive power generation capacity has been added during the last three years through renewable energy sources, against the total target of 5,974 MW. Year-wise achievements have ranged from 81% to 152% of the set targets, which is indicative of good performance. Details of these targets and achievement are given in the Statement (*See below*).

(d) Does not arise in view of the position given in reply to parts (b) and (c) above.

(e) The Government is providing various fiscal and financial incentives to promote the setting up of the renewable power generation projects, mainly through private investment. These include capital/interest subsidy, accelerated depreciation and nil/concessional excise and customs duties. Further, under the Electricity Act 2003, it has been made obligatory upon State Electricity Regulatory Authorities to fix a minimum percentage for purchase of electricity from renewable sources taking into account local factors. Preferential tariff for grid interactive renewable power is also being given in most potential States following the provisions made under the National Electricity Policy 2005 and National Tariff Policy 2006.

Statement

Details of targets set and achievements made for grid-interactive renewable power generation installed capacity during the last 3 years

Sl. No.	Year	Target (MW)	Achievement (MW)	Percentage (%)
1.	2006-07	1407	2138	152%
2.	2007-08	1987	2146	108%
3.	2008-09	2580	2083.39	81%

MW = Megawatt

Third generation solar energy technology

‡3274. SHRI LALIT KISHORE CHATURVEDI: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

- (a) what is the third generation solar energy technology;
- (b) the per unit cost of solar energy under this technology;
- (c) the arrangement made in Germany, Great Britain and other European countries to make it more economical;
- (d) the potential of solar energy in Rajasthan and how much solar energy can be generated; and
- (e) whether Government proposes to deliberate upon generating solar energy in Rajasthan through third generation solar energy technology?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) to (c) Generally non-silicon thin film module technologies such as cadmium telluride, copper indium diselenide, dye sensitized thin film module technologies, are popularly referred to as third generation solar energy technologies. As these technologies use less material and energy, their production cost is expected to be lower in comparison to that of crystalline silicon technology. At present their conversion efficiencies are lower to that of crystalline silicon based modules. Further, most of these technologies are not yet in large commercial production. Apart from support for research, European countries offer feed-in-tariff for purpose of solar power, including power produced from any of the new technologies.

(d) and (e) Rajasthan receives about 5.5 to 6.8 kWh of solar radiation per square metre per day. It is estimated that about 35 to 50 MW capacity solar power plant can be set up one square kilometer land area. Project developers can select any technology including the third generation technology to set up power plants.

‡Original notice of the question was received in Hindi.