(c) the future plans in this regard?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) A potential of around 90,000 MWeq for energy/power generation from different renewable energy sources (excluding solar) in the country has been estimated which include 48,561 MW from wind, 15,384 MW from small hydro and 26,367 MW from bio-power. The potential for solar energy is estimated for most parts of the country at around 20 MW per square kilometer of open, shadow free area covered with solar collectors.

(b) Around 17,173 MW grid interactive power generation capacity has been installed from these renewable energy sources as on 30.06.2010 throughout the country. This includes, 12,009 MW from wind, 2767 MW from small hydro, 2313 MW from biomass, 72 MW from waste to energy and 12 MW from solar. In addition, around 420 MW off-grid/captive power capacity has been also added from renewable energy sources till 30.06.2010.

(c) A target of 12,229 MW grid interactive renewable power generation capacity addition has been set during the 11th Plan period, against which around 6,917 MW grid interactive renewable power generation capacity has been added during the first three years and three months upto 30.06.2010.

The Government has also approved Jawaharlal Nehru National Solar Mission (JNNSM) to give a major boost to development and deployment of solar energy technologies in the country. The Mission aims at creating an enabling policy framework for deployment of 20,000 MW of solar power, 2000 MW off-grid applications, including 20 million solar lighting systems and 20 million sq. solar thermal collector area by 2022, split over three phases.

Potential of sunshine

823. SHRI K.V.P. RAMACHANDRA RAO: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether it is a fact that the country has a great potential of sunshine;

(b) if so, whether Government is aware that hydrogen can be produced from sun rays; and

(c) if so, the present state of technology in the country?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) India is well endowed with solar radiation with about 300 clear sunny days in a year in most parts of the country. The daily average solar radiation received in different parts of the country is in the range of 4 - 7 kWh/m^2.

(b) and (c) Yes, Sir. It is technically feasible to produce hydrogen by splitting water using solar energy through electrolysis, photo-catalytic, photo-electro-chemical and thermo-chemical processes. Academic institutions and research organizations like Banaras Hindu University, Varanasi; Indian Institute of Chemical Technology, Hyderabad and Institute of Minerals and Materials Technology, Bhubaneswar are involved in the research and development efforts for hydrogen production using solar energy through electrolysis, photo-catalytic and photo-electro-chemical processes.

FDI in power sector

824. DR. T. SUBBARAMI REDDY: Will the Minister of POWER be pleased to state:

(a) whether Foreign Direct Investment (FDI) into the power sector is being considered seriously;

(b) if so, whether the Central Government has decided as early as 2003 to allow 100 per cent FDI into the power sector but the investment flow has not come through;

(c) how many countries have forwarded proposals for setting up power projects in the country and how many of them have been considered; and

(d) the total number of countries who are willing to invest in power sector?