Setting up of solar projects by CIL

1560. SHRIMATI GUNDU SUDHARANI: Will the Minister of COAL be pleased to state:

(a) whether the Coal India Limited (CIL) is contributing to reduce carbon pollution since it is one of the largest polluting companies in the country;

(b) whether it is a fact that CIL is planning to set up 1,000 MW of solar projects;

(c) if so, the details thereof;

(d) whether any tentative sites have been identified for this purpose;

(e) if so, the details thereof;

(f) whether CIL has explored the possibility of setting up of the above projects in Andhra Pradesh and Telangana;

(g) if so, the details thereof; and

(h) if not, the reasons therefor?

THE MINISTER OF STATE OF THE MINISTRY OF COAL (SHRI PIYUSH GOYAL): (a) Coal India Limited (CIL) is a mining company and does not use coal for industrial purpose like power generation. However, extraction of coal has some effect on environment in terms of dust, air pollution, water pollution and land degradation. Adequate measures are taken by the project proponents to mitigate these effects as per the approved Environmental Management Plans (EMPs).

(b) to (h) CIL has already installed 2.2 MW solar power projects in two of its subsidiaries *i.e.*2.00 MW in MCL and 0.20 MW in Central Mine Planning and Design Institute Limited (CMPDI) to curb carbon emissions. Recently, CIL has signed MoU with Solar Energy Corporation of India (SECI) to install 1000 MW Solar Power plants in the solar parks in different parts of India including Andhra Pradesh and Telengana to be identified by SECI, in a phased manner.

Coal-combustion based on power plants

†1561. SHRI NARESH AGRAWAL: Will the Minister of COAL be pleased to state:

(a) whether it is a fact that the coal-combustion based power plants create a large amount of carbon di-oxide and are the single biggest threat to the climate;

†Original notice of the question was received in Hindi.

(b) if so, the measures taken, so far, by Government to minimize this threat;

(c) whether Government has been able to find out the substitute of the coal-combustion based power plants; and

(d) if so, the details thereof and if not, the reasons therefor?

THE MINISTER OF STATE OF THE MINISTRY OF COAL (SHRI PIYUSH GOYAL): (a) Central Electricity Authority (CEA) compiles a CO_2 database for all Grid connected Power stations in the country on annual basis and publish the same. The objective of this database is to establish authentic and consistent quantification of the CO_2 emission baseline. The data of CO_2 emission from Indian power sector of last five years is as under:

(Absolute Emissions in Million tons CO_2)

2008-09	2009-10	2010-11	2011-12	2012-13
548.6	580.0	597.7	637.3	696.3

Note : Above table shows growing emission of CO_2 by the power plants.

(b) Government of India is taking following measures to reduce CO_2 emissions in coal based Thermal Power Plants:

(1) **Adoption of more efficient Super Critical Technology for thermal power generation** Supercritical technology has been adopted to enhance the efficiency of coal fired power generation and reduce coal consumption and carbon emissions. With the adoption of supercritical parameters, efficiency gain of about 2% is possible. All Ultra mega Projects being implemented are necessarily required to adopt this technology. A capacity addition of 22700 MW based on supercritical technology has already been achieved till date. Regarding 13th Plan, it is proposed that coal fired capacity addition shall be through supercritical units only.

(2) **Renovation, modernization and life extension of old power generating units:** Renovation and Modernization (R&M) and Life Extension (LE) of existing old power stations provide an opportunity to get additional generation at low cost in short gestation period. Besides generation improvement, it results in improvement of efficiency thus reducing fossil fuel consumption, CEA had prepared a National Enhanced Efficiency Renovation and Modernization

Programme for thermal power stations for implementation during 11th and 12th Plans. R&M and LE works of total capacity of 18316 MW have been completed till date.

(3) **Retirement of inefficient thermal generation units:** Number of units is running on low efficiency and low Plant load factor in the country. These units are planned to be retired in a phased manner in case of which R&M is not feasible. A total capacity of 3114 MW has already been retired till date.

(4) **Promoting energy efficiency in existing thermal power plants by introducing of Perform Achieve and Trade Scheme (PAT)** PAT is a market based mechanism in National Mission on Enhanced Energy Efficiency (NMEEE) wherein 144 fossil fuel fired power generation plants are identified as Designated Consumers (DCs). The reduction target for each power plant is in terms specific percentage of their present deviation of the operating net heat rate from the design net heat rate. It is estimated that an amount of 3.211 million tonnes of oil equivalent energy would be saved by power sector thereby reducing the CO_2 emissions. The targets are assigned for these 144 no. of thermal power station individually and are notified on 30th March 2012 *vide* S.O. No.687(E) for the first PAT cycle (2012-15).

(c) and (d) To reduce emission of greenhouse gases and to also reduce dependence on coal, a low carbon growth strategy has been adopted in the planning process and highest priority is being accorded to the development of electricity generation based on hydro, nuclear and renewable sources of energy to the extent possible. However, the rising demand of electricity cannot be met alone with power generation from hydro, renewable and nuclear sources. Natural gas is already in short supply in the country. Even the existing gas based generating units are not getting sufficient gas for operation. Hence, a mix of coal, hydro, renewable and nuclear sources is planned to meet the rising demand of power in the country. Coal will continue to be main stay of power generation in near future.

Generation capacity addition target during Twelfth Five Year Plan is 88,537 MW from conventional sources on an all-India basis. This comprises of 10,897 MW hydro, 72,340 MW thermal and 5,300 MW nuclear. In addition, the capacity addition planned from Renewable sources is 30,000 MW during Twelfth Five Year Plan.