

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 3088
TO BE ANSWERED ON 17.12.2015

UPGRADATION OF TECHNOLOGY IN SOLAR AND WIND ENERGY

3088. SHRI RAKESH SINGH:

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

- (a) whether modern technology for power generation through solar and wind energy is available in the country;
- (b) if so, the year-wise details of generation of power through these alternative sources of energy during the last five years and the current year, State/UT-wise;
- (c) whether solar and wind energy projects are functioning with optimum capacity through the available technologies, if so, the details thereof; and
- (d) whether foreign assistance is required/ has been sought to promote power generation, through the said sources in the country and if so, the details thereof along with the steps taken/ proposed to be taken by the Government to bring/ attract foreign investment in this regard?

ANSWER

THE MINISTER OF STATE FOR POWER, COAL & NEW AND RENEWABLE ENERGY
(INDEPENDENT CHARGE) (SHRI PIYUSH GOYAL)

(a)&(b): Yes, Madam. The year-wise power generation through solar and wind in different States are given in Annexure - A and Annexure - B, respectively.

(c): The Capacity Utilization Factor (CUF) of solar photovoltaic power plants installed under Phase-I, Batch-II of National Solar Mission is up to 21%, which is quite satisfactory. In the case of wind energy projects, the CUF varies from 20% to 32% depending on wind zones.

(d): As per Government of India's policies, foreign investment is allowed under automatic route. The Ministry would encourage foreign investment in solar power in order to achieve the target of 100GW by 2022. In wind power, the capacity addition is mainly through private sector investment including foreign investors. Various fiscal and financial incentives are available to attract the foreign investment in this sector.

**Annexure-A referred to in reply to Parts (a)&(b) of the Lok Sabha Unstarred Question
No. 3088 for 17.12.2015**

**STATE-WISE DETAILS OF POWER GENERATED FROM SOLAR PLANTS
DURING LAST THREE YEARS**

(All figures in MU)

State	2012-13	2013-14	2014-15
Chandigarh	0.000	0.000	2.230
Delhi	3.677	3.286	3.184
Haryana	0.000	0.000	10.362
Punjab	1.285	51.689	129.889
Rajasthan	266.339	1052.228	1259.185
Uttar Pradesh	14.106	14.962	20.128
Uttarakhand	0.000	5.548	11.630
Oil India Ltd.	0.000	0.000	9.090
NTPC Dadri + FBD + Unchahar	0.000	6.097	22.896
Chhattisgarh	2.490	11.417	12.653
Goa/NTPC Rajgar	0.000	0.004	62.939
Gujarat	1145.524	1369.390	1474.563
Madhya Pradesh	10.820	247.050	562.292
Maharashtra	28.607	257.424	349.320
Dadra and Nagar Haveli	0.000	0.000	0.033
Daman & Diu	0.000	0.000	0.150
Andhra Pradesh	108.840	207.110	159.772
Telangana	0.000	0.000	138.125
Karnataka	16.273	38.253	100.391
Kerala	0.000	0.000	0.000
Puducherry/NTPC Ramagundam	0.000	2.451	15.619
Tamil Nadu	25.883	38.873	158.748
Lakshadweep	0.000	0.000	4.904
Jharkhand	6.813	0.000	8.317
Orissa	17.977	34.279	44.939
West Bengal	0.000	0.000	7.583
NTPC Andman/Talchar	0.000	6.505	18.790
Assam	0.000	0.000	9.647
Neepco	0.000	0.000	0.984
Total	1648.634	3346.566	4598.363

Note: 1. The data is as per information received from SLDC/Utilities and is provisional
2. The figures for 2012-13 and 2013-14 include data for only some of the utilities which furnished information to CEA

Annexure - B

**Annexure-B referred to in reply to Parts (a)&(b) of the Lok Sabha Unstarred Question
No. 3088 for 17.12.2015**

State-wise wind power capacity addition during last five years and for the current year:

State-wise wind power generation capacity addition during the last 5 years & current year (in MW)								
S. No	State/UT	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16*	Total
1	Andhra Pradesh	55.4	54.05	202.1	298.5	285.8	103	998.85
2	Gujarat	312.8	789.85	208.3	279.8	190.7	231.4	2012.85
3	Karnataka	254.05	206.65	201.65	183	319.8	82.08	1247.23
4	Madhya Pradesh	46.5	100.5	9.6	37.4	456.6	177.49	828.09
5	Maharashtra	239.05	416.5	288.55	1074	345.6	192.05	2555.75
6	Rajasthan	436.7	545.65	615.5	98.8	524.1	469.99	2690.74
7	Tamil Nadu	997.4	1083.46	174.6	107.38	185.5	59.7	2608.04
	Total	2341.9	3196.66	1700.3	2078.88	2308.1	1315.71	12941.55

*Tentative up to November 2015