

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 2514
TO BE ANSWERED ON 16.03.2017

RENEWABLE ENERGY SOURCES

2514. SHRI R. PARTHIPAN:

SHRI J.J.T. NATTERJEE:

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

- (a) whether the renewable energy sources and technologies have potential to provide solutions to the long-standing energy problems being faced by the developing countries like India;
- (b) if so, the details thereof;
- (c) whether the renewable energy sources like wind energy, solar energy, geothermal energy, ocean energy, biomass energy and fuel cell technology are successfully tapped by the Government;
- (d) if so, the details thereof, source wise;
- (e) whether all the States are launching such projects; and
- (f) if so, the details thereof?

ANSWER

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

(a) & (b): Yes Madam, the renewable energy sources have a potential to provide sustainable energy in the country. A potential of 1096 GW has been estimated from various renewable energy sources in the country. The state-wise details of the potential available under various renewable energy sources i.e. Solar, Wind, Small Hydro Power and Biopower is given in Annexure-I.

(c) to (f): The renewable energy sources i.e. Wind Energy, Solar Energy, Small Hydro Power, and Biopower are successfully being tapped by the Government. As on 31-12-2016, a total capacity of 50018 MW of Grid Interactive Renewable Power has been installed in the country from various renewable energy sources which include 9012.69 MW from Solar Power, 28700.44 MW from Wind Power, 4333.85 MW from Small Hydro Power and 7971.02 MW from Biopower. The state-wise and source-wise achievement, reported upto 31-12-2016, under various renewable energy sources is given in Annexure-II.

No Commercial projects have been set up using Geothermal, Ocean as Fuel Cell technologies.

ANNEXURE I

**REFERRED TO IN REPLY TO PART (a) & (b) OF LOK SABHA UNSTARRED QUESTION NO.
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State-wise & source-wise estimated potential of Renewable Energy.

Sl. No.	STATES / Uts	Wind Power (MW) @ 100m	Small Hydro Power (MW)	Bio-Energy			Solar (MW)	Total (MW)
				Biomass Power (MW)	Bagase Cogeneration (MW)	Waste To Energy (MW)		
1	Andhra Pradesh	44229	978	578	300	123	38440	84648
2	Arunachal Pradesh		1341	8			8650	10000
3	Assam		239	212		8	13760	14218
4	Bihar		223	619	300	73	11200	12415
5	Chhattisgarh	77	1107	236		24	18270	19714
6	Goa	1	7	26			880	913
7	Gujarat	84431	202	1221	350	112	35770	122086
8	Haryana		110	1333	350	24	4560	6377
9	Himachal Pradesh		2398	142		2	33840	36382
10	Jammu & Kashmir		1431	43			111050	112523
11	Jharkhand		209	90		10	18180	18489
12	Karnataka	55857	4141	1131	450		24700	86279
13	Kerala	1700	704	1044		36	6110	9595
14	Madhya Pradesh	10484	820	1364		78	61660	74406
15	Maharashtra	45394	794	1887	1250	287	64320	113933
16	Manipur		109	13		2	10630	10755
17	Meghalaya		230	11		2	5860	6103
18	Mizoram		169	1		2	9090	9261
19	Nagaland		197	10			7290	7497
20	Odisha	3093	295	246		22	25780	29437
21	Punjab		441	3172	300	45	2810	6768
22	Rajasthan	18770	57	1039		62	142310	162238
23	Sikkim		267	2			4940	5209
24	Tamil Nadu	33800	660	1070	450	151	17670	53800
25	Telangana	4244					20410	24654
26	Tripura		47	3		2	2080	2131
27	Uttar Pradesh		461	1617	1250	176	22830	26333
28	Uttarakhandl		1708	24		5	16800	18537
29	West Bengal	2	396	396		148	6260	7202
30	Andaman & Nicobar	8	8				0	16
31	Chandigarh					6	0	6
32	Dadra & Nagar Haveli						0	0
33	Daman & Diu						0	0
34	Delhi					131	2050	2181
35	Lakshadweep	8					0	8
36	Puducherry	153				3	0	156
37	Others					1022	790	1812
	Total	302251	19749	17536	5000	2554	748990	1096081

**REFERRED TO IN REPLY TO PARTS (c) to (f) OF LOK SABHA UNSTARRED QUESTION NO.
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State-wise installed capacity of Grid Interactive Renewable Power as on 31.12.2016.							
S. No.	STATES / Uts	Small Hydro Power	Wind Power	Bio-Power		Solar Power	Total Capacity
				BM Power/Cogen.	Waste to Energy		
		(MW)	(MW)	(MW)	(MW)	(MW)	(MW)
1	Andhra Pradesh	241.98	2092.50	378.20	58.16	979.65	3750.49
2	Arunachal Pradesh	104.605				0.27	104.87
3	Assam	34.11				11.18	45.29
4	Bihar	70.70		92.50		95.91	259.11
5	Chhattisgarh	76.00		228.50		135.19	439.69
6	Goa	0.05				0.05	0.10
7	Gujarat	16.60	4441.57	65.30		1158.5	5681.97
8	Haryana	73.50		96.40		53.27	223.17
9	Himachal Pradesh	798.81				0.33	799.14
10	Jammu & Kashmir	158.03				1.00	159.03
11	Jharkhand	4.05				17.51	21.56
12	Karnataka	1220.73	3154.20	1401.08	1.00	327.53	6104.54
13	Kerala	205.02	43.50			15.86	264.38
14	Madhya Pradesh	86.16	2288.590	92.53	3.90	840.35	3311.53
15	Maharashtra	346.175	4666.03	1967.85	12.72	430.46	7423.24
16	Manipur	5.45				0.01	5.46
17	Meghalaya	31.03				0.01	31.04
18	Mizoram	41.47				0.10	41.57
19	Nagaland	30.67				0.50	31.17
20	Odisha	64.625				77.64	142.27
21	Punjab	170.90		62.00	9.25	545.43	787.58
22	Rajasthan	23.85	4216.72	119.25		1317.64	5677.46
23	Sikkim	52.11				0.01	52.12
24	Tamil Nadu	123.05	7694.33	889.40	8.05	1590.97	10305.80
25	Telangana		98.70	158.10		973.41	1230.21
26	Tripura	16.01				5.02	21.03
27	Uttar Pradesh	25.10		1933.11	5.00	239.26	2202.47
28	Uttarakhand	209.320		72.72		45.10	327.14
29	West Bengal	98.50		300.00		23.07	421.57
30	Andaman & Nicobar	5.25				5.40	10.65
31	Chandigarh					16.20	16.20
32	Dadra & Nagar Haveli					0.60	0.60
33	Daman & Diu					4	4.00
34	Delhi				16.00	38.78	54.78
35	Lakshadweep					0.75	0.75
36	Puducherry					0.03	0.03
37	Others		4.30			61.70	66.00
	Total (MW)	4333.855	28700.440	7856.94	114.08	9012.69	50018.00

MW = Megawatt