

(c) As on 27.12.2017, 883.64 MWp grid connected rooftop solar PV systems have been reported commissioned in the country.

(d) In order to reduce the cost of power generated by rooftop solar, the Ministry is providing financial support upto 30% benchmark cost in general category States/UTs and upto 70% of benchmark cost in special category States/UTs, to residential rooftop projects. Net-metering regulations/tariff orders have been issued by all states which would further enable rooftop solar scheme in residential sector.

Efficient solar PV modules

1741. DR. V. MAITREYAN: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether Government has conducted any studies to find out impact of efficient, cost effective Solar PV modules and windstream technologies in generation of renewable energy in the country;

(b) if so, the details thereof and list of studies conducted and projects implemented annually in last three years, year-wise and State-wise;

(c) detailed list of Renewable Energy (RE) projects proposed and executed during last three years in installations/buildings of both Centre and State Governments/Private Institutes;

(d) whether Government has any plans to approve such new RE projects to make it mandatory for Government/Private sectors; and

(e) if so, details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI RAJ KUMAR SINGH): (a) to (e) The Government has prescribed quality standards for solar modules being utilized in production of solar power and for wind equipment so as to ensure that the solar and wind energy equipment used are efficient.

State-wise details of Renewable Energy capacity commissioned, source-wise, year-wise during each of the last three years are given in the Statement (*See* below).

The Government has set up a target of installing Renewable Energy capacity of 175 GW by 2022 with 100 GW of Solar, 60 GW of Wind, 10 GW of Bio Mass and 5 GW of Small Hydro Projects. The Government has also laid down the bidding trajectory of 80 GW of solar and 29 GW of wind till 2019-2020 so as to achieve the target. The projects are taken up both in the Central and the State sector. Government has also laid down Renewable Purchase Obligation on distribution companies wherein all States have been obligated to purchase solar and non-solar power. Further, Renewable Generation obligations have been laid down for new coal and lignite based thermal power plants.

Statement*Source-wise, year-wise and State-wise achievements made during the last three years and current year (as on 31.03.2017)*

Sl.No.	State/UT	Waste to Energy				Bio-Power				Solar Power			
		2014-15	2015-16	2016-17	Total	2014-15	2015-16	2016-17	Total	2014-15	2015-16	2016-17	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Andhra Pradesh			7.5	7.5				0	126.77	435.11	1294.26	1856.14
2.	Arunachal Pradesh				0				0	0	0.24		0.24
3.	Assam				0				0			11.78	11.78
4.	Bihar				0		11	9	20		5.1	103.42	108.52
5.	Chhattisgarh				0		10		10	0.5	85.98	35.28	121.76
6.	Goa				0				0			0.71	0.71
7.	Gujarat				0	9.9			9.9	83.65	119.12	130.19	332.96
8.	Haryana				0	9.5			9.5	2.5	2.59	66.01	71.1
9.	Himachal Pradesh				0				0		0.2	0.53	0.73
10.	Jammu and Kashmir				0				0		1	0.36	1.36

1	2	3	4	5	6	7	8	9	10	11	12	13	14
11.	Jharkhand				0				0	0	0.19	7.08	7.27
12.	Karnataka				0	32.85	56	50	138.85	46.22	68.24	882.38	996.84
13.	Kerala				0				0	0	13.02	61.15	74.17
14.	Madhya Pradesh				0	0	25		25	205	217.79	80.67	503.46
15.	Maharashtra				0	210.8	134	98	442.8	82.23	25.01	66.61	173.85
16.	Manipur				0				0			0.03	0.03
17.	Meghalaya				0				0			0.01	0.01
18.	Mizoram				0				0		0.1	0	0.1
19.	Nagaland				0				0			0.5	0.5
20.	Odisha				0				0	2.26	35.16	12.5	49.92
21.	Punjab				0				0	168.75	219.79	388.89	777.43
22.	Rajasthan				0			4.95	4.95	228.85	327.83	543	1099.68
23.	Sikkim				0				0			0	0
24.	Tamil Nadu				0	19			19	54.12	919.24	630.01	1603.37
25.	Telangana				0				0	61.25	360.8	759.13	1181.18

354 Written Answers to

[RAJYA SABHA]

Unstarred Questions

26.	Tripura		0				0	5		0.09	5.09
27.	Uttar Pradesh		0	13.5	60.85		74.35	42.16	72.24	193.24	307.64
28.	Uttarakhand		0	0.12			0.12		36.15	192.35	228.5
29.	West Bengal		0		8		8		0.56	18.37	18.93
30.	Andaman and Nicobar		0				0			1.46	1.46
31.	Chandigarh		0				0	2.5	2.31	10.52	15.33
32.	Dadra and Nagar Haveli		0				0			2.97	2.97
33.	Daman and Diu		0				0		4	6.46	10.46
34.	Delhi	16	16				0	0.32	8.82	25.99	35.13
35.	Lakshadweep		0				0			0	0
36.	Puducherry		0				0			0.05	0.05
37.	Others		0				0		58.31	0	58.31
TOTAL		23.5	23.5	295.67	304.85	161.95	762.47	1112.08	3018.9	5526	9656.98

MW = Mega Watt

Written Answers to

[2 January, 2018]

Unstarred Questions 355

Sl.No.	State/UT	Small Hydro Power				Wind Power			
		2014-15	2015-16	2016-17	Total	2014-15	2015-16	2016-17	Total
1	2	15	16	17	18	19	20	21	22
1.	Andhra Pradesh			9	9	285.2	400.1	2187.45	2872.75
2.	Arunachal Pradesh	0.7			0.7				0
3.	Assam				0				0
4.	Bihar				0				0
5.	Chhattisgarh			24	24				
6.	Goa				0				0
7.	Gujarat	1			1	190.73	392.4	1392	1975.13
8.	Haryana	1.4	2		3.4				0
9.	Himachal Pradesh	85.01	69.9	38	192.91				0
10.	Jammu and Kashmir	9		1.5	10.5				0
11.	Jharkhand			0				0	
12.	Karnataka	98	88	8	194	320.1	230.9	882.3	1433.3
13.	Kerala	10.5	30	14.1	54.6	0	8.4	8	16.4

14.	Madhya Pradesh		0		0	456.3	1261.4	356.7	2074.4	Written Answers to [2 January, 2018]
15.	Maharashtra	8	4.45	6.3	18.75	350.45	207.85	117.55	675.85	
16.	Manipur				0				0	
17.	Meghalaya				0				0	
18.	Mizoram			5	5				0	
19.	Nagaland		1		1				0	
20.	Odisha				0				0	
21.	Punjab	1.2	13.5		14.7				0	
22.	Rajasthan				0	523.5	685.5	287.7	1496.7	
23.	Sikkim				0				0	
24.	Tamil Nadu				0	185.5	158.8	247.57	591.87	Unstarred Questions
25.	Telangana	2.2	9.75		11.95		77.7	23.1	100.8	
26.	Tripura				0				0	
27.	Uttar Pradesh				0				0	
28.	Uttarakhand	34.5			34.5				0	
29.	West Bengal	0.1			0.1				0	
30.	Andaman and Nicobar Islands				0				0	

Written Answers to

[2 January, 2018]

Unstarred Questions 357

1	2	15	16	17	18	19	20	21	22
31.	Chandigarh				0				0
32.	Dadra and Nagar Haveli				0				0
33.	Daman and Diu				0				0
34.	Delhi				0				0
35.	Lakshadweep				0				0
36.	Puducherry				0				0
37.	Others				0				0
TOTAL		251.61	218.6	105.9	576.11	2311.78	3423.05	5502.37	11237.2

MW = Mega Watt