

Maximising usage of renewable energy sources

1742. SHRI HUSAIN DALWAI: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether India still depends primarily on thermal power, if so, State-wise details of planned and installed capacity of energy generation from various sources, viz. Coal, Oil, Natural Gas, Solar, Hydro, Wind and Nuclear;

(b) whether States have installed capacities for using biodegradable waste to produce biogas, if so, details of number of biogas plants with respective capacity State-wise; and

(c) the details of steps taken by Government to maximize the use of renewable energy sources, especially biogas plants, since 2014 and progress of each so far?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI RAJ KUMAR SINGH): (a) The share of thermal power capacity (*i.e.* coal, diesel and gas based) is 2,18,960 MW, out of a total installed capacity of 3,30,860 MW (including renewables) which is approximately 66% of the total installed capacity in India as on 30.11.2017. State-wise details of installed capacity of power, including allocated shares, from various sources, viz. coal, oil, gas, Hydro, renewable and nuclear are given in the Statement-I (*See below*). State-wise details of under construction thermal, hydro and nuclear power projects in the country are given in the Statement-II (*See below*).

(b) State-wise details of installed capacities of biogas and BioCNG plants using biodegradable waste and family type biogas plants set up in the country are given in the Statement-III (*See below*).

(c) The Ministry of New and Renewable Energy (MNRE) provides Central Financial Assistance (CFA) for setting up of waste to energy plants using biodegradable waste to produce biogas / BioCNG as well as for setting up of family type biogas plants. Financial support is also provided for training, publicity, communication and back-up support, maintenance and operation of the biogas plants etc. under the National Biogas and Manure Management Programme (NBMMP). State-wise details of numbers of family type biogas plants in the size range of 1 to 6 cubic meter set up since 2014, are given in the Statement-IV.

Statement-I

*State-wise details of installed capacity of power, including allocated shares, from various sources, viz. Coal, Oil, Gas, Hydro, Renewable and Nuclear
(As on 30.11.2017)*

(In Megawatt)									
Sl. No.	State	Thermal				Nuclear	Hydro	Renew-ables	Total
		Coal	Gas	Diesel	Total				
1	2	3	4	5	6	7	8	9	10
1.	Andaman and Nicobar	0	0	40	40	0	0	11	51
2.	Andhra Pradesh	10990	4880	37	15907	0	1150	6544	23601
3.	Arunachal Pradesh	0	0	0	0	0	405	109	514
4.	Assam	500	604	0	1104	0	325	45	1474
5.	Bihar	4980	0	0	4980	0	0	324	5304
6.	Chandigarh	0	0	0	0	0	0	16	16
7.	Chhattisgarh	21268	0	0	21268	0	120	427	21815
8.	Dadra and Nagar Haveli	0	0	0	0	0	0	0	0
9.	Daman and Diu	0	0	0	0	0	0	10	10
10.	Delhi	840	2208	0	3048	0	0	71	3119
11.	Goa	0	48	0	48	0	0	1	49
12.	Gujarat	15492	7551	0	23043	440	1990	6878	32351
13.	Haryana	5540	432	0	5972	0	0	366	6338
14.	Himachal Pradesh	0	0	0	0	0	9645	836	10481

1	2	3	4	5	6	7	8	9	10
15.	Jammu and Kashmir	0	175	0	175	0	3119	159	3453
16.	Jharkhand	4590	0	0	4590	0	273	24	4888
17.	Karnataka	8680	0	153	8833	880	3657	7773	21144
18.	Kerala	0	534	160	694	0	1882	331	2906
19.	Lakshadweep	0	0	0	0	0	0	1	1
20.	Madhya Pradesh	17065	0	0	17065	0	2395	3800	23260
21.	Maharashtra	25226	3460	0	28686	1400	2887	7709	40682
22.	Manipur	0	0	36	36	0	105	7	148
23.	Meghalaya	0	0	0	0	0	372	31	403
24.	Mizoram	0	0	0	0	0	60	42	102
25.	Nagaland	0	0	0	0	0	75	31	106
26.	Odisha	7680	0	0	7680	0	2142	195	10017
27.	Puducherry	0	33	0	33	0	0	0	33
28.	Punjab	6540	0	0	6540	0	1206	1206	8952
29.	Rajasthan	8500	1023	0	9523	1180	411	6629	17743
30.	Sikkim	0	0	0	0	0	2169	52	2221
31.	Tamil Nadu	12760	1027	412	14199	2440	2203	10687	29529
32.	Telangana	6683	0	0	6683	0	2836	2393	11911
33.	Tripura	0	1132	0	1132	0	0	21	1153
34.	Uttar Pradesh	21393	1493	0	22886	440	502	2470	26298
35.	Uttarakhand	0	450	0	450	0	3756	527	4733
36.	West Bengal	14245	100	0	14345	0	1278	432	16055
TOTAL		192972	25150	838	218960	6780	44963	60158	330861

Statement-II

State-wise details of under construction thermal, hydro and nuclear power projects in the country

(In Megawatt)			
Sl. No.	State/Union Territories	Thermal	Hydro Nuclear
1.	Andhra Pradesh	4220	960 -
2.	Arunachal Pradesh	-	2854 -
3.	Assam	286.15	-
4.	Bihar	7600	-
5.	Chhattisgarh	8515	- -
6.	Gujarat	800	- 1400
7.	Haryana	-	- 1400
8.	Himachal Pradesh	-	1885 -
9.	Jammu and Kashmir	-	1265.5 -
10.	Jharkhand	4860	- -
11.	Karnataka	1170	- -
12.	Kerala	-	100 -
13.	Madhya Pradesh	5545	400 1400
14.	Maharashtra	5430	80 -
15.	Odisha	6690	- -
16.	Punjab	-	206 -
17.	Rajasthan	2480	- 1400
18.	Sikkim	-	1133 -
19.	Tamil Nadu	6565	- 4500
20.	Telangana	3480	30 -
21.	Uttar Pradesh	7920	- -
22.	Uttarakhand	-	2430 -
23.	West Bengal	300	120 -
TOTAL		65861.15	11463.5 10100

Statement-III

State-wise details of installed capacities of biogas and BioCNG plants using biodegradable waste and family type biogas plants

Sl. No.	State/Union Territories	Biogas generation Plant	Purified Biogas (BioCNG) generation plant	Family type Biogas generation Plant (1-6 m ³ /day/plant)
		m ³ /day (Nos. of plants)	Kg/day (Nos. of plants)	(Nos. in Lakh)
1	2	3	4	5
1.	Andhra Pradesh	74,640 (6)	-	5.49
2.	Arunachal Pradesh	-	-	0.03
3.	Assam	-	-	1.28
4 .	Bihar	12,000 (1)	-	1.30
5.	Chhattisgarh	-	-	0.54
6.	Goa	-	-	0.04
7.	Gujarat	24,840 (4)	12,538 (2)	4.33
8.	Haryana	-	2,050 (2)	0.62
9.	Himachal Pradesh	12,000 (1)	-	0.48
10.	Jammu and Kashmir	-	-	0.03
11.	Jharkhand	-	-	0.07
12.	Karnataka	58,080 (3)	-	4.90
13.	Kerala	2,760(1)	-	1.49
14.	Madhya Pradesh	5,640 (3)	1,200(1)	3.64
15.	Maharashtra	73,080 (8)	19,533 (3)	8.99
16.	Manipur	-	-	0.02
17.	Meghalaya	-	-	0.10
18.	Mizoram	-	-	0.05
19.	Nagaland	-	-	0.08

1	2	3	4	5
20.	Odisha	-	-	2.70
21.	Punjab	33,720 (5)	1,847 (1)	1.77
22.	Rajasthan	-	4,000 (2)	0.71
23.	Sikkim	-	-	0.09
24.	Tamil Nadu	1,42,920 (27)	-	2.23
25.	Telangana	30,000 (4)	-	0.00
26.	Tripura	-	-	0.04
27.	Uttar Pradesh	46,200 (4)	-	4.41
28.	Uttarakhand	67,200 (5)	5,460(1)	0.21
29.	West Bengal	14,040 (2)	-	3.67
30.	Andaman and Nicobar	-	-	0.00
31.	Chandigarh	-	-	0.00
32.	Dadra and Nagar Haveli	-	-	0.00
33.	Daman and Diu	-	-	0.00
34.	Delhi	-	-	0.01
35.	Lakshadweep	-	-	0.00
36.	Puducherry	-	-	0.01
37.	Others	-	-	0.02
TOTAL		5,97,120 (74)	46,628 (12)	49.57

Statement-IV

State-wise details of family type biogas plants in the size range of 1 to 6 cubic meter set up since 2014

Sl. No.	State/Union Territory	Numbers of biogas Plant Installed		
		2014-15	2015-16	2016-17
1	2	3	4	5
1.	Andhra Pradesh	10555	10343	6561
2.	Arunachal Pradesh	3	0	5
3.	Assam	7500	7600	8638

1	2	3	4	5
4.	Bihar	1	3	0
5.	Chhattisgarh	2736	2213	1371
6.	Goa	12	78	43
7.	Gujarat	1349	1595	1504
8.	Haryana	1008	790	452
9.	Himachal Pradesh	154	114	107
10.	Jammu and Kashmir	28	84	0
11.	Jharkhand	54	142	21
12.	Karnataka	9198	7049	5294
13.	Kerala	2971	2642	2140
14.	Madhya Pradesh	7673	6796	5296
15.	Maharashtra	14825	14577	12653
16.	Manipur	0	0	0
17.	Meghalaya	0	0	0
18.	Mizoram	260	280	112
19.	Nagaland	250	0	0
20.	Odisha	4145	2930	1975
21.	Punjab	7856	4281	1385
22.	Rajasthan	1013	568	413
23.	Sikkim	139	170	0
24.	Tamil Nadu	579	308	125
25.	Telangana	9900	9099	3792
26.	Tripura	40	165	87
27.	Uttar Pradesh	1417	1239	508
28.	Uttarakhand	937	1454	1396
29.	West Bengal	279	185	0
30.	KVIC, Mumbai	-	-	3411
TOTAL		84882	74705	57289