

GOVERNMENT OF INDIA  
MINISTRY OF NEW AND RENEWABLE ENERGY  
**LOK SABHA**  
**UNSTARRED QUESTION NO-2222**  
TO BE ANSWERED ON-08.03.2018  
**GENERATION OF NEW AND RENEWABLE ENERGY**

2222. SHRI R.P. MARUTHARAJAA  
SHRI AJAY NISHAD

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

- (a) the details of power generated through renewable energy sources including small and micro hydro power plants in the country during each of the last three years and the current year, source-wise and State-wise;
- (b) whether any new power plants/ projects were started during the last three years and if so, the details thereof, source-wise and State-wise;
- (c) the funds allocated/sanctioned to the State Governments to generate power through these sources along with the total amount of funds spent by the Union Government, Public Sector Undertakings and private sector in this regard during the said period and for 2018-19, State-wise and source-wise;
- (d) the State-wise percentage of funds utilized by the State Governments for the development of these sources during the said period, source-wise;
- (e) whether these States have not utilized the funds sanctioned by the Union Government for the development of these sources;
- (f) if so, the reasons therefor and the steps taken by the Government in this regard; and
- (g) the other steps taken or proposed to be taken by the Government for the development of these sources?

**ANSWER**

THE MINISTER OF STATE FOR NEW & RENEWABLE ENERGY AND POWER (I/C) (SHRI R.K. SINGH)

(a): The state-wise and source-wise details of the power generated through renewable energy sources including small and micro hydro power plants in the country during each of the last three years and the current year are given in Annexure I.

(b): A total of 29.34 GW of renewable energy capacity has been installed through implementation of various renewable energy programmes/projects during last three years and current year. The state-wise and sources-wise details of capacity addition are given in Annexure-II.

(c) to (f) : Central Financial Assistance released to various states and public sector undertakings for implementation of various renewable energy projects during the last three years (2014-15 to 2016-17) and current year ( upto Feb'2018) are given in statement at Annexure-III. Scheme-wise /source-wise details of expenditure for various renewable energy projects during the last three years (2014-15 to 2016-17) and current year (up to January, 2018) are given in Annexure-IV. A budget estimate of Rs 5146.63 crore has been allocated for the financial year 2018-19.

The states /nodal agencies are utilizing the released funds for implementation of various renewable energy projects. In some cases pace of utilization of funds is slow, mainly due to delays in identification of the beneficiaries, getting statutory clearances from different organizations, finalization of tenders, arranging loans/state's share and in some cases natural calamities etc.

To ensure proper utilization of the funds, MNRE obtains periodic physical & financial progress reports, utilization certificates & audited statements of expenditure. Periodic review meeting are also held with the State Departments/State Nodal Agencies and other Stakeholder for timely utilization of funds.

(g): The steps taken by the Government for development of renewable energy sources in the country, inter alia, include the following:-

- i. Announcement of a target of installing 175 GW of renewable energy capacity by March, 2022;
- ii. Declaration of trajectory for Renewable Purchase Obligation (RPO) up to the year 2018-19;
- iii. Declared Renewable Generation Obligation on new coal/lignite based thermal plants;
- iv. Issued order for waiving the Inter State Transmission System charges and losses for inter-state sale of solar and wind power for projects to be commissioned up to March, 2019;
- v. Notified National Offshore Wind Energy Policy;
- vi. Notified Policy for Repowering of Wind Power projects;
- vii. Notified standards for deployment of solar photovoltaic systems/devices and
- viii. Launched AtalJyotiYojna for Solar LED street lights in five states.

\*\*\*\*\*

## Annexure-I

ANNEXURE-I REFERRED TO IN REPLY TO LOK SABHA UNSTARRED QUESTION  
NO.2222, Part (a) TO BE ANSWERED ON 8/3/2018

State-wise and Source-wise power generation from various renewable energy sources during the last three years (2014-15 to 2016-17) and current year (upto January'2018).

(Million Units)						
S. No	State	Wind	Solar	Small Hydel	Bio-Power	Total
<b>Year 2014-15</b>						
1	Chandigarh	0	2.23	0	0	2.23
2	Delhi	0	3.18	0	113.44	116.63
3	Haryana	0	10.36	280.96	179.36	470.69
4	HP	0	0	1685.08	0	1685.08
5	J & K	0	0	313.23	0	313.23
6	Punjab	0	129.89	543.53	485.87	1159.29
7	Rajasthan	4053.85	1259.19	5.3	278.24	5596.57
8	Uttar Pradesh	0	20.13	30.3	3090.27	3140.7
9	Uttarakhand	0	11.63	565.25	87.5	664.38
10	NTPC Dadri+FBD+Unchahar+Singrauli	0	22.9	0	0	22.9
11	Oil India Ltd	117.78	9.14	0	0	126.93
12	Chhattisgarh	0	13.54	8.4	1044.35	1066.29
13	NTPC Rajgarh	0	62.94	0	0	62.94
14	Gujarat	5660.09	1474.56	47.13	40.48	7222.27
15	Madhya Pradesh	592.25	562.29	196.71	76.26	1427.51
16	Maharashtra	6804.8	349.32	275.82	2853.99	10283.93
17	Dadra and Nagar Haveli	0	0.03	0	0	0.03
18	Daman & Diu	0	0.15	0	0	0.15
19	Andhra Pradesh	1675.82	159.77	274.61	600.85	2711.06
20	Telangana	0	138.12	60.43	604.31	802.86
21	Karnataka	4658.1	100.39	1845.75	3090.66	9694.9
22	Kerala	58.4	0	570.53	0.71	629.64
23	NTPC Ramagundam	0	15.62	0	0	15.62
24	Tamil Nadu	10147.06	158.75	226.81	1369.79	11902.39
25	Lakshadweep	0	5.13	0	40.96	46.09
26	Andaman Nicobar	0	0	0.47	0	0.47
27	Bihar	0	0	29.01	180.11	209.13
28	Jharkhand	0	8.32	0	0	8.32
29	Odisha	0	44.94	284.88	0	329.82
30	Sikkim	0	0	20.88	0	20.88
31	West Bengal	0.16	7.07	325.43	1220.97	1553.63
32	DVC	0	0	146.86	0	146.86
33	NTPC Andman+Talchar	0	18.79	0	0	18.79
34	Arunachal Pradesh	0	0	51.94	0	51.94
35	Assam	0	9.65	54.87	0	64.52
36	Manipur	0	0	0	0	0
37	Meghalaya	0	0	66.94	0	66.94
38	Mizoram	0	0	34.86	0	34.86
39	Nagaland	0	0	84.14	0	84.14
40	Tripura	0	0	29.37	0	29.37
41	Neepco	0	0.98	0	0	0.98
	<b>Total</b>	<b>33768.30</b>	<b>4599.02</b>	<b>8059.50</b>	<b>15358.11</b>	<b>61784.93</b>

(Million Units)						
S. No	State	Wind	Solar	Small Hydel	Bio-Power	Total
<b>Year 2015-16</b>						
1	Chandigarh .	0	3.4	0	0	3.4
2	Delhi .	0	4.11	0	124.87	128.97
3	Haryana .	0	114.96	992.65	235.55	1343.15
4	HP .	0	0	1921.77	0	1921.77
5	J & K .	0	0	304.79	0	304.79
6	Punjab .	0	380.57	490.08	603.54	1474.2
7	Rajasthan .	4583.59	1766.1	5.06	245.49	6600.24
8	Uttar Pradesh .	0	89.75	29.73	3082.01	3201.49
9	Uttarakhand .	0	5.87	605.69	91.86	703.42
10	NTPC Dadri/FBD/Unchahar/Singrauli .	0	42.41	0	0	42.41
11	Oil India Ltd .	183.77	9.9	0	0	193.67
12	Chhattisgarh .	0	52.7	30.41	1119.32	1202.42
13	NTPC Rajgarh .	0	81	0	0	81
14	Gujarat .	6446.58	1497.6	36.27	23.28	8003.73
15	Madhya Pradesh .	1558.43	1105.28	118.54	128.17	2910.42
16	Maharashtra .	6121.34	638.76	562.77	3433.71	10756.58
17	Dadra and Nagar Haveli .	0	0.5	0	0	0.5
18	Daman & Diu .	0	4.25	0	0	4.25
19	Andhra Pradesh .	2013.04	282.67	103.1	707.8	3106.61
20	Telangana .	0	402.51	48.69	576.7	1027.9
21	Karnataka .	4797.95	187.69	1483.48	3591.92	10061.03
22	Kerala .	51.45	7.38	486.99	72.96	618.78
23	NTPC Rama .	0	16.02	0	0	16.02
24	Tamil Nadu .	7273.23	507.18	214.02	1337.05	9331.47
25	Lakshadweep .	0	1.02	0	0	1.02
26	Andaman Nicobar .	0	6.26	12.46	0	18.72
27	Bihar .	0	6.39	48.69	110.02	165.11
28	Jharkhand .	0	19.77	0	0	19.77
29	Odisha .	0	150.73	263.24	20.48	434.45
30	Sikkim .	0	0	41.93	0	41.93
31	West Bengal .	0	6.28	157.57	1444.3	1608.15
32	DVC .	0	0	118.26	0	118.26
33	NTPC Andman/Talchar .	0	18.91	0	0	18.91
34	Arunachal Pradesh .	0	0.22	18.22	0	18.44
35	Assam .	0	31.6	59.34	0	90.94
36	Manipur .	0	0	0	0	0
37	Meghalaya .	0	0	65.96	0	65.96
38	Mizoram .	0	0	27.62	0	27.62
39	Nagaland .	0	0	88.73	0	88.73
40	Tripura .	0	0	18.47	0	18.47
41	Neepco .	0	6.15	0	0	6.15
	<b>Total</b>	<b>33029.39</b>	<b>7447.92</b>	<b>8354.51</b>	<b>16949.03</b>	<b>65780.85</b>

(Million Units)						
S. No	State	Wind	Solar	Small Hydel	Bio-Power	Total
<b>Year 2016-17</b>						
1	Chandigarh	0	13.16	0	0	13.16
2	Delhi	0	5.68	0	139.05	144.73
3	Haryana	0	19.7	238.8	191.04	449.54
4	HP	0	0	2015.58	0	2015.58
5	J & K	0	0.77	325.36	0	326.12
6	Punjab	0	909.2	497.99	742.31	2149.49
7	Rajasthan	5562.52	2131.61	6.76	272.97	7973.85
8	Uttar Pradesh	0	230.95	27.83	3379.48	3638.26
9	Uttarakhand .	0	37.77	850.5	110.92	999.19
10	NTPC Dadri/FBD/ Unchahar/Singrauli/Bhadla	0	74.9	0	0	74.9
11	Oil India Ltd	201.61	25.59	0	0	227.2
12	Chhattisgarh	0	120.91	44.21	1281.1	1446.22
13	NTPC Rajgarh	0	82.21	0	0	82.21
14	Gujarat	7720.01	1738.28	27.54	12.16	9497.99
15	Madhya Pradesh	3563.17	1366.1	224.46	114.94	5268.67
16	Maharashtra	7490.75	577.83	609.58	2614.54	11292.7
17	Dadra and Nagar Haveli	0	1.31	0	0	1.31
18	Daman & Diu	0	14.43	0	0	14.43
19	Andhra Pradesh	3187.85	1599.78	168.75	526.88	5483.26
20	Telangana	211.93	1337.9	52.62	397.42	1999.89
21	Karnataka	6058.65	524.67	1294.25	1708.11	9585.68
22	Kerala	72.59	26.52	462.38	1.23	562.72
23	NTPC Ramagundam/Anantapuram	0	350.53	0	0	350.53
24	Tamil Nadu	11935.26	1898.34	93.79	1226.48	15153.87
25	Lakshadweep	0	1.59	0	0	1.59
26	Punducherry	0	0.34	0	0	0.34
27	Andaman & Nicobar	0	6.17	13.86	0	20.03
28	Bihar	0	109.18	21.96	161.38	292.53
29	Jharkhand	0	38.47	0	0	38.47
30	Odisha	0	210.81	239.05	57.85	507.71
31	Sikkim	0	0	35.78	0	35.78
32	West Bengal	0	14.96	120.86	1433.95	1569.77
33	DVC	0	0.01	14.08	0	14.09
34	NTPC Andaman/ Talcher	0	20	0	0	20
35	Arunachal Pradesh	0	0.14	27.29	0	27.43
36	Assam	0	2.69	11.47	0	14.15
37	Manipur	0	0.01	0	0	0.01
38	Meghalaya	0	0	59.1	0	59.1
39	Mizoram	0	0	49.62	0	49.62
40	Nagaland	0	0	92.73	0	92.73
41	Tripura	0	0	46.47	0	46.47
42	NEEPCO	0	6.89	0	0	6.89
	<b>Total</b>	<b>46004.34</b>	<b>13499.41</b>	<b>7672.66</b>	<b>14371.80</b>	<b>81548.21</b>

(Million Units)						
S. No	State	Wind	Solar	Small Hydel	Bio-Power	Total
<b>Year 2017-18 (1st APRIL'2017- 31<sup>st</sup> Jan'2018)</b>						
1	Chandigarh	0	6.35	0	0	6.35
2	Delhi	0	11.03	0	189.89	200.92
3	Haryana	0	51.84	193.75	199.06	444.66
4	HP	0	0	1802.59	0	1802.59
5	J & K	0	0	291	0	291
6	Punjab	0	1194.18	174.57	815.37	2184.11
7	Rajasthan	5060.64	2802.06	5.89	284.75	8153.33
8	Uttar Pradesh	0	476.52	25.03	2649.76	3151.31
9	Uttarakhand .	0	201.32	529.36	52.85	783.53
10	NTPC Dadri/FBD/ Unchahar/Singrauli/Bhadla/	0	392.4	0	0	392.4
11	Oil India Ltd	193.66	21.22	0	0	214.88
12	Chhattisgarh	0	96.48	19.62	778	894.1
13	NTPC Rajgarh/Rojmal/Mandsaur	27.28	270.15	0	0	297.43
14	Gujarat	8522	1634.78	34.18	24.83	10215.79
15	Madhya Pradesh	3619.82	1430.77	109.12	64.02	5223.73
16	Maharashtra	6099.69	848.25	496.17	2467	9911.1
17	Dadra and Nagar Haveli	0	4.5	0	0	4.5
18	Daman & Diu	0	15.12	0	0	15.12
19	Andhra Pradesh	5576.89	2892.76	139.77	290.16	8899.59
20	Telangana	180.23	2977.68	47.99	282.4	3488.29
21	Karnataka	6623.48	1527.92	1531.08	1510.38	11192.86
22	Kerala	86.75	45.88	554.63	0	687.25
23	NTPC Ramagundam/Anantapuram	0	347.37	0	0	347.37
24	Tamil Nadu	11491.81	2259.01	159.42	618.81	14529.05
25	Lakshadweep	0	1.46	0	0	1.46
26	Puducherry	0	1.06	0	0	1.06
27	Andaman & Nicobar	0	5.39	11.37	0	16.77
28	Bihar	0	106.11	6.58	86.63	199.32
29	Jharkhand	0	15.92	0	0	15.92
30	Odisha	0	167.13	243.95	34.09	445.17
31	Sikkim	0	0	28.54	0	28.54
32	West Bengal	0	15.75	155.97	1160.92	1332.64
33	DVC	0	0.05	8.68	0	8.73
34	NTPC Andaman/ Talcher	0	16.42	0	0	16.42
35	Arunachal Pradesh	0	0.21	0.46	0	0.68
36	Assam	0	7.34	14	0	21.34
37	Manipur	0	0.04	0	0	0.04
38	Meghalaya	0	0	61.4	0	61.4
39	Mizoram	0	0	48.96	0	48.96
40	Nagaland	0	0	84.21	0	84.21
41	Tripura	0	0	36.57	0	36.57
42	NEEPCO	0	5.51	0	0	5.51
	<b>Total</b>	<b>47482.24</b>	<b>19850</b>	<b>6814.86</b>	11508.9	<b>85655.99</b>

Source: Central Electricity Authority (CEA)

Note: Data as received from State Load Dispatch Centre (SLDC) of the respective states of the electricity department.

**Annexure-II**

**ANNEXURE-II REFERRED TO IN REPLY TO LOK SABHA UNSTARRED QUESTION NO.  
2222 Part (b) TO BE ANSWERED ON 8/3/2018**

<b>Source-wise and State-wise achievements made during the last three years and current year (2014-15 to 2016-17 and current year (upto Jan 2018)</b>						
<b>(in MW)</b>						
<b>S.No.</b>	<b>State/UT</b>	<b>Solar Power</b>	<b>Wind Power</b>	<b>Small hydro Power</b>	<b>Bio-Power</b>	<b>Waste to Energy</b>
1	Andhra Pradesh	2159.24	3088.65	20	0	10.91
2	Arunanchal Pradesh	4.36	0	0.705	0	0
3	Assam	12.45	0	0	0	0
4	Bihar	142.45	0	0	20	0
5	Chhattisgarh	177.93	0	24	10	0
6	Goa	0.91	0	0	0	0
7	Gujarat	669.45	2196.08	1	9.9	1.11
8	Haryana	205.55	0	3.4	34.5	0
9	Himachal Pradesh	2.23	0	205.71	0	0
10	Jammu & Kashmir	2.36	0	22.5	0	0
11	Jharkhand	9.6	0	0	0	0
12	Karnataka	2757.63	1475	199	291.45	0
13	Kerala	107.91	16.4	60.6	0	0
14	Madhya Pradesh	883.83	2080.7	0	25	0
15	Maharashtra	493.82	675.85	45.75	442.8	0
16	Manipur	1.33	0	0	0	0
17	Meghalaya	0.06	0	0	0	0
18	Mizoram	0.2	0	5	0	0
19	Nagaland	0.5	0	1	0	0
20	Orissa	50.07	0	0	0	0
21	Punjab	896.7	0	14.7	15	1.2
22	Rajasthan	1598.56	1496.7	0	4.95	0
23	Sikkim	0.01	0	0	0	0
24	Tamil Nadu	1734.12	704.91	0	34	0
25	Telangana	2942.61	100.8	11.95	0	0
26	Tripura	5.09	0	0	0	0
27	Uttar Pradesh	522.05	0	0	98.85	8.19
28	Uttrakhand	289.09	0	34.5	0.12	0
29	West Bengal	41.32	0	0.1	8	0
30	Andaman & Nicobar	7.97	0	0	0	0
31	Chandigarh	23.2	0	0	0	0
32	Dadar & Nagar Haveli	5.46	0	0	0	0
33	Daman & Diu	10.61	0	0	0	0
34	Delhi	64.37	0	0	0	12
35	Lakshwadeep	0	0	0	0	0
36	Pondicherry	0.15	0	0	0	0
37	Others	0	0	0	0	0
	<b>Total</b>	<b>15823.19</b>	<b>11835.09</b>	<b>649.915</b>	<b>994.57</b>	<b>33.41</b>

## ANNEXURE-III REFERRED TO IN REPLY TO LOK SABHA UNSTARRED QUESTION NO.

2222 Part (c to f ) TO BE ANSWERED ON 8/3/2018

## State-wise and year-wise details of Funds released during last three years (2014-15 to 2016-17) and current year( upto 5/3/2018)

S No.	State / UT Name	2014-15	2015-16	2016-17	(Rs in crore)
					2017-18 (upto 5/3/2018 )
1	ANDHRA PRADESH	1.86	5.08	1.92	3.38
2	ARUNACHAL PRADESH	15.68	5.39	20.08	21.69
3	ASSAM	16.15	14.7	60.28	15.01
4	BIHAR	6.74	16.19		
5	CHANDIGARH	11.32	10.03	9.69	2.23
6	CHHATTISGARH	36.09	42.59	72.92	159.51
7	DADRA & NAGAR HAVELI	0.03	0	0	0.34
8	DAMAN & DIU	0.03	00	0	0
9	DELHI	31.64	43.15	166.04	311.28
10	GOA	1.22	1.57	0.17	0.002
11	GUJARAT	36.09	58.6	74.09	126.05
12	HARYANA	52.22	78.22	16.24	1.80
13	HIMACHAL PRADESH	23.99	52.93	36.39	13.44
14	JAMMU AND KASHMIR	61.79	90.91	49.67	14.36
15	JHARKHAND	7.61	16.08	12.87	5.58
16	KARNATAKA	51.41	60.82	52.42	37.80
17	KERALA	31.93	32.73	36.17	39.11
18	LAKSHADWEEP	0.07	3.78	0.46	
19	MADHYA PRADESH	30.26	6.8	40.16	398.08
20	MAHARASHTRA	229.04	248.4	155.21	27.49
21	MANIPUR	1.63	14.61	12.53	0.61
22	MEGHALAYA	8.39	8.57	20.52	8.88
23	MIZORAM	8.98	10.58	22.38	18.08
24	NAGALAND	9.9	7.81	17.97	10.38
25	ODISHA	27.92	10.78	21.17	9.50
26	PUDUCHERRY	0.01	0.01	1.11	0.31
27	PUNJAB	39.96	29.08	9.19	2.71
28	RAJASTHAN	113.3	249.54	86.85	50.07
29	SIKKIM	3.09	0.84	2.87	0.18
30	TAMIL NADU	52.64	194.86	169.28	36.94
31	TELANGANA	98.04	155.04	99.19	161.66
32	TRIPURA	1.94	5.42	14.57	0.70
33	UTTAR PRADESH	61.01	55.36	28.11	32.33
34	UTTARAKHAND	8.35	51.14	41.92	23.49
35	WEST BENGAL	17.17	9.3	1.37	6.48
36	ANDAMAN AND NICOBAR	0.09	0.03	0.48	3.02
37	CENTRAL AGENCY	1376.54	1720.93	1187.01	1806.39

**ANNEXURE-IV REFERRED TO IN REPLY TO LOK SABHA UNSTARRED  
QUESTION NO 2222 PART (c to f), TO BE ANSWERED ON 08/03/2018**

**Scheme-wise details of expenditure for various renewable energy projects during the last  
three years (2014-15 to 2016-17) and current year (up to January, 2018)**

**Scheme-wise/ Source-wise Plan Outlay and Expenditure during FY 2014-15 & 2016-17**

Resource/ Sector	FY 2014-15			FY 2015-16		
	BE	RE	Exp.	BE	RE	Exp.
Grid-Interactive & Distributed Renewable Power	2018.00	1845.00	1844.65	2410.00	3902.00	3896.87
RE for Rural Applications	157.50	153.50	148.64	160.00	109.21	102.91
RE for Urban, Industrial and Commercial Applications	14.00	14.00	12.43	4.62	4.62	4.62
RD&D in RE	149.50	128.00	127.45	90.00	106.00	100.98
Supporting Programmes	180.00	378.50	369.32	123.05	124.70	123.97
<b>Total Gross Budgetary Support (GBS)</b>	<b>2519.00</b>	<b>2519.00</b>	<b>2502.49</b>	<b>2787.67</b>	<b>4246.53</b>	<b>4229.45</b>

**Scheme-wise / Source-wise Plan Outlay and Expenditure during FY 2016-17**

(Amount in Rs crore)			
Resource/ Sector	FY 2016-17		
	BE	RE	Exp.
Grid-Interactive Renewable Power	3519.00	3076.70	2924.22
Off Grid/ Distributed and Decentralized Renewable Power	983.00	858.8	689.68
Research, Development and International Cooperation	445.00	336.50	225.42
Support Institutions under the aegis of MNRE	53.00	35.00	32.00
<b>Total</b>	<b>5000.00</b>	<b>4307.00</b>	<b>3871.32 (89.88%)</b>



## Annexure-IV (cont.)

## Scheme-wise/Source-wise Plan Outlay and Expenditure during FY 2017-18 (as on 31.01.2018)

(Amount in Rs crore)			
Resource/ Sector	FY 2017-18		
	BE	RE	Exp. as on 31.01.2018
Grid-Interactive Renewable Power	3591.50	2421.10	2366.43
Off Grid/ Distributed and Decentralized Renewable Power	560.20	720.90	525.56
NE Areas	525.00	394.00	0.00
Autonomous Bodies and Support Programmes	393.60	237.60	140.11
Special Component for SC/ST	276.00	216.00	182.50
Investment to public sector	90.00	51.00	50.00
Non-Plan	36.54	39.40	31.99
<b>Total</b>	<b>5472.84</b>	<b>4080.00</b>	<b>3296.59</b>