

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
STARRED QUESTION NO-321

TO BE ANSWERED ON-09.08.2018

GENERATION OF SOLAR POWER

*321. SHRI BHARTRUHARI MAHTAB
SHRI RAHUL SHEWALE

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

- (a) the criteria followed by the Government for setting up of solar parks in the country along with the targets set by the Government for generation of solar power in the country by the year 2022 and the achievements made by the Government in this direction so far;
- (b) whether the Government is lagging behind in achieving the targets set for the generation of solar power in the country;
- (c) if so, the details thereof along with the quantum of solar power generated in the country during each of the last three years and the current year, State/UT-wise;
- (d) the funds provided by the Government for generation and creation of additional capacity of solar power in the country during the said period, State/UT-wise; and
- (e) the other steps taken/being taken by the Government for promoting the generation and use of solar power and bringing transparency in utilisation of funds for the purpose?

ANSWER

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

(a) to (e) A Statement is laid on the Table of the House.

Statement

Statement referred to in reply to parts (a) to (e) of the Lok Sabha Starred Question No. 321 for answer on 09.08.2018 regarding “Generation of Solar Power”.

a) Under the Solar Park Scheme, solar parks can be set up in all the States and Union Territories. The capacity of the solar parks is generally 500 MW and above. However, smaller parks are also considered in states where there is shortage of non-agricultural land. The land requirement is approximately 5 acres per MW for setting up of solar projects. The solar parks are developed in collaboration with the State Governments and their agencies, Central Public Sector Undertakings(CPSUs), and private entrepreneurs. The private entrepreneurs are selected through a competitive bidding process. Based on proposals received from the State Governments, CPSUs, private entrepreneurs, the Government gives ‘in principle’ approval. The final approval is given on receipt of details of land and Detailed Project Report (DPR)

The Government has set a target of installing 100 GW of solar power capacity by 2022. Solar power capacity of 23.12 GW has been installed in the country up to 31.7.2018.

b) The Government have laid down a trajectory to achieve the target of 100 GW by 2022. A capacity of 23.12 GW has already been installed up to July, 2018. Projects of around 10 GW are under implementation and tenders for additional 23.4 GW have been issued. The country is on track to achieve the target of 100 GW of solar capacity by 2022.

c) As per the report received from the Central Electricity Authority (CEA), the details of quantum of solar power generated in the country during each of the last three years and the current year, State/UT-wise are given in Annexure-I.

(d) No State/UT-wise budgetary allocation is made under various schemes/programmes of the Ministry of New & Renewable Energy (MNRE). However, details of amount released by MNRE for generation and creation of additional capacity of solar power in the country during last three years and current year are given below:

Year	Total funds released (Rs. Crore)
2015-16	3146.24
2016-17	2590.59
2017-18	1889.95
2018-19 (as on 30.06.2018)	708.21

The State/UT-wise details of funds released during the last three years and current year under few schemes of MNRE are given in Annexure-II.

(e) The Government have launched several schemes for promotion, development & deployment of solar energy in the country providing fiscal and promotional incentives such as capital subsidy, accelerated depreciation, waiver of Inter State Transmission System (ISTS) charges and losses, viability gap funding (VGF), financing solar rooftop systems as part of home loan and permitting Foreign Direct Investment up to 100 per cent under the automatic route.

In addition, Government provide capital subsidy for setting up of manufacturing units for solar cells and modules and the entire value chain under Modified Special Incentive Package Scheme (M-SIPS) through the Ministry of Electronics and Information Technology.

Under MNRE schemes such as Viability Gap Funding (VGF), and the Central Public Sector Undertakings (CPSUs) scheme or the Defence scheme, the financial support for projects and solar tariff is determined through a transparent competitive bidding method.

ANNEXURE-I

**ANNEXURE-I REFERRED TO IN REPLY TO PART (c) OF LOK SABHA
STARRED QUESTION NO. 321 FOR 09.08.2018**

The quantum of Solar Power Generated in the country during each of the last three years and the current year, State/UT-Wise

(in Million Units)

Sl. No.	State	2015 - 16	2016 - 17	2017 - 18	2018 - 19 (up to June 2018)
1	Andaman & Nicobar	6.26	6.17	6.88	1.51
2	Andhra Pradesh	282.67	1599.78	3658.97	1139.93
3	Arunachal Pradesh	0.22	0.14	0.23	0.28
4	Assam	31.60	2.69	8.36	1.56
5	Bihar	6.39	109.18	145.34	37.12
6	Chandigarh	3.40	13.16	7.87	5.01
7	Chhattisgarh	52.70	120.91	136.54	92.05
8	Dadra and Nagar Haveli	0.50	1.31	5.23	1.52
9	Daman & Diu	4.25	14.43	18.53	5.20
10	Delhi	4.11	5.68	13.41	3.81
11	Gujarat	1497.60	1738.28	2048.40	610.70
12	Haryana	114.96	19.70	64.65	18.44
13	Himachal Pradesh	0.00	0.00	0.00	0.00
14	Jammu & Kashmir	0.00	0.77	0.00	0.00
15	Jharkhand	19.77	38.47	19.47	4.97
16	Karnataka	187.69	524.67	2391.73	1590.30
17	Kerala	7.38	26.52	55.35	16.21
18	Lakshadweep	1.02	1.59	1.79	0.37
19	Madhya Pradesh	1105.28	1366.10	1911.70	625.12
20	Maharashtra	638.76	577.83	1100.67	529.69
21	Manipur	0.00	0.01	0.15	0.12
22	Meghalaya	0.00	0.00	0.00	0.00
23	Mizoram	0.00	0.00	0.00	0.00
24	Nagaland	0.00	0.00	0.00	0.00
25	Orissa	150.73	210.81	204.77	59.94
26	Puduchhery	0.00	0.34	1.17	0.51
27	Punjab	380.57	909.20	1432.07	465.22
28	Rajasthan	1766.10	2131.61	3469.25	1040.89
29	Sikkim	0.00	0.00	0.00	0.00
30	Tamil Nadu	507.18	1898.34	2906.01	834.41
31	Telangana	402.51	1337.90	4013.80	1628.75
32	Tripura	0.00	0.00	0.00	0.00
33	Uttar Pradesh	89.75	230.95	637.02	304.99
34	Uttarakhand	5.87	37.77	291.08	92.03
35	West Bengal	6.28	14.96	20.47	9.41
36	DVC	0.00	0.01	0.06	0.02
37	NEEPCO	6.15	6.89	6.71	1.70
38	NTPC Andman/Talchar	18.91	20.00	20.43	5.27
39	NTPC Dadri/FBD/Unchahar /Singrauli	42.41	74.90	480.99	129.19
40	NTPC Rajgarh	81.00	82.21	340.13	139.15
41	NTPC Ramagundam	16.02	350.53	426.37	112.03
42	Oil India Ltd	9.90	25.59	25.46	6.56
	Total	7447.92	13499.41	25871.07	9513.98

**ANNEXURE-II REFERRED TO IN REPLY TO PART (d) OF LOK SABHA
STARRED QUESTION NO. 321 FOR 09.08.2018**

Details of Funds Released During the Last Three Years and Current Year under a few schemes

(I) PILOT-CUM-DEMONSTRATION PROJECT FOR DEVELOPMENT OF GRID-CONNECTED SOLAR PV POWER PLANTS ON CANAL BANKS AND CANAL TOPS

CFA released by SECI (excluding fund handling fees) to Project Implementing Agencies in States

(Rs. in Crore)

Sl. No.	State	2015-16	2016-17	2017-18	2018-19
1	Andhra Pradesh	2.08	1.82	-	-
2	Gujarat	10.50	10.32		
3	Karnataka	4.82	3.39		
4	Kerala	1.50	1.21		
5	Punjab	12.00	3.00		
6	Uttar Pradesh	2.83	0		
7	Uttarakhand	6.30	6.30		
8	West Bengal	3.00	4.80		
Total		43.03	30.83	0	0

(II) SCHEME FOR SETTING UP OF GRID CONNECTED SOLAR PV POWER PROJECTS BY CPSUs AND GOVT. ORGANIZATIONS WITH VIABILITY GAP FUNDING (VGF)

CFA released by SECI (excluding fund handling fees) to CPSUs/Govt. Organizations

(Rs. in Crore)

States	2015-16	2016-17	2017-18	2018-19
Andhra Pradesh	125.00	127.50	2.50	0.00
Madhya Pradesh	0.00	82.50	114.75	0.00
Rajasthan	0.00	180.00	0.00	0.00
Tamil Nadu	0.00	2.50	63.75	3.75
Telangana	0.00	0.75	0.75	0.00
Uttar Pradesh	0.00	0.25	1.69	1.25
Dadra & Nagar Haveli	0.00	0.00	1.50	0.00
Total	125.00	393.50	184.94	5.00

(III) DEVELOPMENT OF SOLAR PARKS AND ULTRA MEGA SOLAR POWER PROJECTS

Year wise CFA Released under the Solar Park Scheme (including fund handling charges to SECI)

(Rs. in Crore)

Sl. No.	State	Solar Park	2015-16	2016-17	2017-18	2018-19
1	A & N	NTPC	0.25	0.00	0.00	0.00
2	Andhra Pradesh	Ananthapuramu Solar Park	63.02	0.00	0.00	0.00
3		Kurnool Solar Park	40.40	0.00	18.12	0.00
4		Kadapa solar park	0.00	10.35	10.10	4.04
5		Ananthapuramu-II Solar Park	0.00	5.30	5.05	2.02
6		Ext Trans Infra for Ananthapur Solar Park	0.00	26.74	33.86	0.00
7		Ext Trans Infra for Kurnool Solar Park	0.00	31.13	43.61	0.00
8		Hybrid Solar Wind Park	0.00	0.00	0.25	0.00
Sub-Total of Andhra Pradesh			103.42	73.52	110.99	6.06
9	Arunachal Pradesh	Lohit Solar Park	0.25	0.82	0.00	0.00
10	Chhattisgarh	Solar Park in Chhattisgarh	0.25	0.00	0.00	0.00
11	Gujarat	Radnesada Solar Park	30.67	0.00	4.17	0.00
12		Harsad Solar Park	0.00	0.00	0.25	0.00
13		Dholera Solar Park	0.00	0.00	0.00	0.00
14		Ext-Gujarat-PGCIL	0.00	0.00	0.00	24.11
Sub-Total of Gujarat			30.67	0.00	4.42	24.11
15	Haryana	Solar Park in Haryana	0.25	0.00	0.00	0.00
16	Himachal Pradesh	Solar Park in HP	0.25	0.00	0.00	0.00
17	Jammu and Kashmir	Solar Park in J&K	0.00	0.25	0.00	0.00
18	Karnataka	Pavagada Solar Park	90.50	80.80	0.00	0.00
19		Ext Trans Infra for Pavagada Solar Park	0.00	28.28	12.12	40.40
Sub-Total of Karnataka			90.50	109.08	12.12	40.40
20	Kerala	Kasargod Solar Park	2.27	0.00	0.00	0.00
21	Madhya Pradesh	Neemuch-Mandsaur Solar Park	0.00	0.00	0.00	25.49
22		Rewa Solar Park	31.98	30.30	8.92	0.00
23		Rajgarh-Morena Solar Park	0.00	0.25	0.00	0.00
24		Chhatarpur Solar Park	0.00	0.25	0.00	0.00
25		Ext Trans Infra for Rewa Solar Park	0.00	25.76	4.55	0.00
Sub-Total of Madhya Pradesh			31.98	56.56	13.47	25.49
26	Maharashtra	Sai Guru Solar Park	0.25	5.05	0.00	0.00
27		Patoda Solar Park	0.25	5.05	0.00	0.00
28		Dandoicha Solar Park	0.25	0.00	0.00	0.00
Sub-Total of Maharashtra			0.75	10.10	0.00	0.00
29	Manipur	Bukpi Solar Park	0.00	0.00	0.25	0.00
30	Meghalaya	Solar Park in Meghalaya	0.25	0.00	0.00	0.00
31	Mizoram	Vankal Solar Park	0.00	0.00	0.25	0.00
32	Nagaland	Solar Park in Nagaland	0.25	0.00	0.00	0.00

Sl. No.	State	Solar Park	2015-16	2016-17	2017-18	2018-19
33	Odisha	Solar Park in Odisha	0.00	0.25	0.00	0.00
34	Punjab	Solar Park in Punjab	0.00	0.00	0.00	0.00
35	Rajasthan	Bhadla Ph-II Solar Park	28.27	0.00	0.00	0.00
36		Bhadla Ph-III Solar Park	46.25	4.50	17.79	14.28
37		Bhadla Ph-IV Solar Park	0.25	27.27	24.24	0.00
38		Phalodi-Pokaran Solar Park	0.25	0.00	0.00	0.00
39		Fatehgarh 1B Solar Park	0.25	0.00	0.00	0.00
40		Jaisalmer Ph I Solar Park	10.35	0.00	0.00	0.00
41		Nokh Solar Park	0.00	0.00	0.25	0.00
42		Ext Trans Infra for Bhadla-II, III, IV SP to RVPN	0.00	50.81	0.00	0.00
43		Ext Trans Infra for Bhadla-III, Bhadla-IV, PP to PGCIL	0.00	30.26	0.08	30.22
Sub-Total of Rajasthan			85.62	112.84	42.36	44.50
44	Tamil Nadu	Kadaladi Soalr Park	0.00	0.00	0.25	0.00
45	Telangana	Gattu Solar Park	0.00	0.00	0.00	0.00
46	Uttar Pradesh	UP Solar Park	18.26	0.00	0.00	0.00
47		Ext Trans Infra for UP solar park	0.00	0.00	17.36	0.00
Sub-Total of Uttar Pradesh			18.26	0.00	17.36	0.00
48	Uttarakhand	SIIDCUL Solar Park	0.25	2.36	0.00	0.00
49	West Bengal	Solar Park in West Bengal	0.25	2.12	0.00	0.00
Total			365.73	367.90	201.46	140.56

(IV) GRID CONNECTED SOLAR ROOFTOPS

State-wise CFA released

(Rs. in Crore)

Sl. No.	State/UTs	2015-16	2016-17	2017-18	2018-19
1	Andhra Pradesh	3.87	9.15	4.82	20.93
2	Assam	0.00	38.46	0.00	0.00
3	Andaman & Nicobar	0.00	0.53	7.00	0.00
4	Chhattisgarh	3.60	5.50	3.30	0.00
5	Delhi	5.76	19.47	21.40	0.00
6	Gujarat	4.50	17.43	23.18	50.24
7	Goa	1.44	0.00	0.00	0.00
8	Haryana	3.60	16.22	0.00	0.00
9	J& K	0.00	3.68	0.00	0.00
10	Jharkhand	0.00	12.71	0.00	0.00
11	Kerala	4.68	4.05	9.41	0.00
12	Karnataka	0.00	2.52	0.00	0.00
13	Lakshadweep	0.00	0.46	0.00	0.00
14	Madhya Pradesh	1.24	31.96	3.14	0.00
15	Maharashtra	0.00	23.18	0.00	0.00
16	Odisha	2.88	0.86	1.61	0.00
17	Puduchchery	0.00	1.10	0.00	0.00
18	Punjab	9.22	4.50	0.00	0.00
19	Rajasthan	4.26	14.79	11.68	6.44
20	Tamil Nadu	8.23	69.67	0.00	0.00
21	Telangana	3.78	20.12	2.72	0.00
22	Tripura	0.00	0.00	0.70	0.00
23	Uttarakhand	22.13	25.97	27.09	0.00
24	Uttar Pradesh	5.86	1.16	2.32	0.00
25	West Bengal	3.09	0.17	6.30	0.00
26	Chandigarh	9.09	6.72	1.73	16.06
27	Manipur	0.91	8.11	0.00	0.00
28	Himachal Pradesh	0.00	5.43	0.00	0.00
29	Arunachal Pradesh	0.00	0.00	14.06	0.00
30	Mizoram	0.00	0.00	4.54	0.00
	Sub- Total	98.14	343.89	144.99	93.66
31	PSU/Govt. Department	18.52	74.74	16.75	1.37
32	SECI	128.00	250.00	3.68	0.00
33	NISE	2.62	0.00	2.38	0.00
34	TERI	0.09	0.00	0.13	0.00
35	others (NFDC)	0.02	9.38	0.00	0.00
	Total	247.39	678.01	167.93	95.04

**(V) ROOFTOP PV AND SMALL SOLAR POWER GENERATION PROGRAMME
(RPSSGP) SOLAR GBI SCHEME**

CFA released by IREDA to State Govt. Organizations

(Rs. in Lakh)

Sl. No.	State	Organizations	2015-16	2016-17	2017-18	2018-19 (as on 30.06.2018)
1	Andhra Pradesh	Andhra Pradesh Central Power Distribution Company Limited	1349.35	664.62	568.07	353.49
2	Chhattisgarh	Chhattisgarh State Power Distribution Co. Ltd.	931.43	463.58	671.27	156.95
3	Orissa	GRIDCO Ltd.	1450.50	1820.32	676.69	427.02
4	Haryana	Haryana Power Purchase Centre	1707.06	1077.15	335.05	379.21
5	Rajasthan	Rajasthan Urja Vikas Nigam/Jaipur Vidyut Vitran Nigam Ltd.	2426.96	1728.82	623.17	317.16
6	Jharkhand	Jharkhand State Electricity Board	2949.24	2099.46	1322.15	984.03
7	Madhya Pradesh	M.P.Power Management Company Limited, Jabalpur	1111.98	877.95	200.70	88.48
8	Uttar Pradesh	Dakhinanchal/Madhyanchal Vidyut Vitran Nigam Limited	837.16	1050.63	514.26	0
9	Maharashtra	Maharashtra State Electricity Distribution Company Limited	1083.77	785.69	709.03	0
10	Punjab	Punjab State Power Corporation Limited	1696.96	856.31	332.06	110.61
11	Tamil Nadu	Tamil Nadu Generation & Distribution Corporation Limited	1524.11	1076.77	552.69	784.75
12	Telangana	Telangana Power Distribution Company Limited	1503.22	758.36	3789.23	280.88
13	Uttarakhand	Uttarakhand Power Corporation Ltd	1199.47	711.67	491.43	56.44
TOTAL			19771.20	13971.31	10785.80	3939.02

VI) DEMO SOLAR GBI SCHEME

CFA released by IREDA to States

(Rs. in Lakh)

Sl. No.	State	Organizations	2015-16	2016-17	2017-18	2018-19 (as on 30.06.2018)
1	Maharashtra	Maharashtra State Generation Co. Ltd.	583.01	121.86	128.93	0
2	Rajasthan	Par Solar Pvt. Ltd.	711.88	266.58	266.58	0
3	Rajasthan	Reliance Industries Ltd.	2342.60	0	1552.22	0
Sub-Total of Rajasthan			3054.48	266.58	1818.80	0
4	Tamil Nadu	Sapphire Industrial Infrastructure Pvt. Ltd.	1399.44	804.27	216.94	0
5	Andhra Pradesh	Sri Power Generation India Pvt. Ltd.	380.72	25.83	285.17	0
TOTAL			5417.65	1218.54	2449.84	0