

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 1904
ANSWERED ON 04.08.2026

INNOVATIVE SOLAR APPLICATIONS

1904 SHRI VIJAY CHINTAKAYALA

WILL THE MINISTER OF NEW AND RENEWABLE ENERGY BE PLEASED TO
STATE:

- (a) the State-wise and year-wise details of the total number and installed capacity of solar power plants, by category (ground-mounted, rooftop, agrivoltaics and others), during the last five years, including district-wise details for Andhra Pradesh;
- (b) whether Government has conducted any study on the potential of agrivoltaics and other innovative solar deployment models to improve land-use efficiency, if so, the details and findings thereof; and
- (c) whether any official definitions or standards have been developed or proposed for agrivoltaics and integrated solar systems, if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR NEW & RENEWABLE ENERGY AND POWER

(SHRI SHRIPAD YESSO NAIK)

(a) The details of the total installed capacity of solar power projects in the country, including Andhra Pradesh, during the last five years are given at **Annexure-I**. The district-wise details of installed solar capacity in the State of Andhra Pradesh are given at **Annexure-II**.

(b) Studies undertaken by third-party institutions have estimated theoretical agrivoltaic potential in the range of 1,192 GW to 2,129 GW. These estimates represent only a theoretical potential and are subject to factors such as land suitability, cropping patterns, climatic conditions, technical configuration and other site-specific considerations.

The National Institute of Solar Energy (NISE) and Indian Council of Agricultural Research have been engaged for studies relating to agrivoltaics, including assessment of the suitability of different crops under agrivoltaic systems across different agro-climatic conditions.

(c) The Bureau of Indian Standards (BIS) has constituted the Agricultural Systems and Management Sectional Committee (FAD 22) for development of standards relating to the Agrivoltaics Farming Production System. An initial draft covering, inter alia, definitions, technical aspects of agrivoltaic systems and crop suitability has been prepared by the concerned Working Group. The Ministry has also constituted an Expert Committee for development of a Handbook on agrivoltaics in India.

Annexure-I referred to in reply to part (a) of Rajya Sabha Unstarred Question No. 1904 for 04.08.2026

State and category wise breakup of the solar capacity added in the country in the FY 2025-26

State wise Commissioning of Solar Projects						
Sr. No.	State/UT	Capacity added				
		Ground	Rooftop	Solar (Hy)	Off Grid	Total
1	Andhra Pradesh	1391.69	483.70	249.42		2124.81
2	Arunachal Pradesh				0.59	0.59
3	Assam	90.26	283.10		0.27	373.63
4	Bihar		107.00			107.00
5	Chhattisgarh	405.51	60.20			465.71
6	Goa	6.56	18.50			25.06
7	Gujarat	8491.75	1776.60	459.93	77.98	10806.26
8	Haryana	0.96	359.80		182.65	543.41
9	Himachal Pradesh	111.96	42.07			154.03
10	Jammu & Kashmir				4.99	4.99
11	Jharkhand		1.86		53.67	55.53
12	Karnataka	992.98	146.20	277.85	4.95	1421.98
13	Kerala	17.05	659.60			676.65
14	Ladakh		3.20		1.02	4.22
15	Madhya Pradesh	486.94	380.00			866.94
16	Maharashtra	6176.60	2144.10		614.20	8934.90
17	Manipur		3.49		0.24	3.73
18	Meghalaya					
19	Mizoram		3.30			3.30
20	Nagaland				0.17	0.17
21	Odisha	150.52	86.20		22.28	259.00
22	Punjab	0.50	127.40		35.61	163.51
23	Rajasthan	12140.73	574.60		10.82	12726.15
24	Sikkim					
25	Tamil Nadu	2821.85	600.10		4.15	3426.10
26	Telangana		223.00			223.00
27	Tripura	1.99	7.40		4.91	14.30
28	Uttar Pradesh	330.89	393.40		34.79	759.08
29	Uttarakhand	242.65			2.17	244.82
30	West Bengal					
31	Andaman & Nicobar		2.21			2.21
32	Chandigarh					
33	DD & DNH		86.78			86.78
34	Delhi		107.80			107.80
35	Lakshadweep		1.60			1.60
36	Puducherry		27.00			27.00
37	Other-NABARD					
Total		33861.38	8710.21	987.20	1055.46	44614.25

State and category wise breakup of the solar capacity added in the country in the FY 2024-25

State wise Commissioning of Solar Projects						
Sr. No.	State/UT	Capacity added				
		Ground	Rooftop	Solar (Hy)	Off Grid	Total
1	Andhra Pradesh	692.34	92.68			785.02
2	Arunachal Pradesh		2.34		0.72	3.06
3	Assam	21.00	19.36			40.36
4	Bihar	50.00	39.11			89.11
5	Chhattisgarh	100.95	31.70		2.00	134.65
6	Goa	1.00	11.59		0.37	12.96
7	Gujarat	3045.52	1649.30	222.54	34.41	4951.77
8	Haryana	1.00	237.83		350.42	589.25
9	Himachal Pradesh	103.20	5.32		0.52	109.03
10	Jammu & Kashmir		4.54		4.51	9.05
11	Jharkhand		1.17		36.30	37.47
12	Karnataka	942.33	102.80	81.00	8.85	1134.97
13	Kerala	0.42	515.55		0.18	516.15
14	Ladakh					
15	Madhya Pradesh	952.91	167.03		3.00	1122.94
16	Maharashtra	2146.23	1226.65		1064.72	4437.60
17	Manipur		0.75			0.75
18	Meghalaya				0.03	0.03
19	Mizoram		0.04		0.04	0.08
20	Nagaland					
21	Odisha	92.84	21.88		14.09	128.81
22	Punjab		97.15		0.01	97.16
23	Rajasthan	6431.15	361.55		146.20	6938.90
24	Sikkim	0.52				0.52
25	Tamil Nadu	1604.61	333.04		4.55	1942.20
26	Telangana		83.94			83.94
27	Tripura	0.10	0.02		2.66	2.78
28	Uttar Pradesh	281.99	56.80		104.95	443.74
29	Uttarakhand		11.00		6.54	17.54
30	West Bengal	126.55				126.55
31	Andaman & Nicobar					
32	Chandigarh		13.33			13.33
33	DD & DNH	1.66				1.66
34	Delhi		56.89			56.89
35	Lakshadweep					
36	Puducherry	0.15	4.45			4.60
37	Other-NABARD					
Total		16596.43	5147.81	303.54	1785.09	23832.87

State and category wise breakup of the solar capacity added in the country in the FY 2023-24

State wise Commissioning of Solar Projects						
Sr. No.	State/UT	Capacity added				
		Ground	Rooftop	Solar (Hy)	Off Grid	Total
1	Andhra Pradesh	21.85	28.94			50.79
2	Arunachal Pradesh				0.15	0.15
3	Assam		8.26		0.00	8.26
4	Bihar	5.00	41.34			46.34
5	Chhattisgarh	240.78	20.79		2.00	263.57
6	Goa		15.99		1.00	16.99
7	Gujarat	2857.39	963.79	462.82	6.31	4290.31
8	Haryana		161.33		285.23	446.56
9	Himachal Pradesh	3.75			3.99	7.74
10	Jammu & Kashmir		15.06		0.94	16.00
11	Jharkhand	1.95	53.54		1.07	56.56
12	Karnataka	303.27				303.27
13	Kerala	22.94	234.66		3.75	261.35
14	Ladakh					
15	Madhya Pradesh	1091.31	88.85		13.13	1193.29
16	Maharashtra	839.33	582.79		104.65	1526.77
17	Manipur	0.60			0.16	0.76
18	Meghalaya				0.09	0.09
19	Mizoram	1.90	0.40			2.30
20	Nagaland				0.13	0.13
21	Odisha	15.60	26.56		0.30	42.46
22	Punjab	54.52	101.99		0.50	157.01
23	Rajasthan	3528.25	267.26	401.00	95.38	4291.89
24	Sikkim		2.36			2.36
25	Tamil Nadu	1260.76	213.09		1.10	1474.95
26	Telangana		92.13			92.13
27	Tripura				0.86	0.86
28	Uttar Pradesh	360.96			44.15	405.11
29	Uttarakhand					
30	West Bengal		14.09			14.09
31	Andaman & Nicobar					
32	Chandigarh		6.83			6.83
33	DD & DNH					
34	Delhi	0.88	37.37			38.25
35	Lakshadweep	1.70				1.70
36	Puducherry	0.08	14.30			14.38
37	Other-NABARD					
Total		10612.82	2991.72	863.82	564.90	15033.26

State and category wise breakup of the solar capacity added in the country in the FY 2022-23

Sr. No.	State/UT	Capacity added				
		Ground	Rooftop	Solar (Hy)	Off Grid	Total
1	Andhra Pradesh	127.38	20.05			147.43
2	Arunachal Pradesh				0.41	0.41
3	Assam	29.97			0.01	29.98
4	Bihar	2.13			0.13	2.25
5	Chhattisgarh	218.55	18.21		193.98	430.74
6	Goa		6.54			6.54
7	Gujarat	1246.35	686.78	128.14	13.27	2074.53
8	Haryana		31.94		86.59	118.53
9	Himachal Pradesh	4.95			6.38	11.33
10	Jammu & Kashmir		0.60		1.91	2.51
11	Jharkhand		3.12		13.93	17.05
12	Karnataka	403.94	246.66			650.60
13	Kerala	131.95	265.90		0.41	398.26
14	Ladakh					
15	Madhya Pradesh		79.93		4.26	84.19
16	Maharashtra	1362.90	546.71		182.27	2091.88
17	Manipur				0.03	0.03
18	Meghalaya					
19	Mizoram	20.00	0.11			20.11
20	Nagaland					
21	Odisha				1.93	1.93
22	Punjab	3.17	32.15		31.87	67.19
23	Rajasthan	3360.48	138.56	750.60	241.19	4490.83
24	Sikkim					
25	Tamil Nadu	1606.08	52.46		10.71	1669.25
26	Telangana	82.52	63.03			145.55
27	Tripura		0.37		2.34	2.71
28	Uttar Pradesh	223.00	6.32		41.47	270.79
29	Uttarakhand				1.99	1.99
30	West Bengal	13.80			0.18	13.98
31	Andaman & Nicobar	0.42				0.42
32	Chandigarh		3.52			3.52
33	DD & DNH		0.29			0.29
34	Delhi		7.14			7.14
35	Lakshadweep					
36	Puducherry		21.84			21.84
37	Other-NABARD					
Total		8837.58	2232.23	878.74	835.27	12783.81

State and category wise breakup of the solar capacity added in the country in the FY 2021-22

State wise Commissioning of Solar Projects						
Sr. No.	State/UT	Capacity added				
		Ground	Rooftop	Solar (Hy)	Off Grid	Total
1	Andhra Pradesh	84.55	10.87		88.34	183.76
2	Arunachal Pradesh				5.62	5.62
3	Assam	64.36	1.16		9.43	74.95
4	Bihar		9.97		21.15	31.12
5	Chhattisgarh	65.99	6.86		192.75	265.6
6	Goa		12.39		0.12	12.51
7	Gujarat	1908.5	799.68		41.03	2749.21
8	Haryana	135	120.37		247.43	502.8
9	Himachal Pradesh	9.15	0.58		23.7	33.43
10	Jammu & Kashmir		9.76		22.44	32.2
11	Jharkhand		2.2		34.53	36.73
12	Karnataka	121.51	83.82		30.31	235.64
13	Kerala	17.9	67.69		20.59	106.18
14	Ladakh		1.8			1.8
15	Madhya Pradesh	72.71	100.38		81.64	254.73
16	Maharashtra	4	294.32		42.73	341.05
17	Manipur				5.89	5.89
18	Meghalaya		0.09		3.94	4.03
19	Mizoram		0.02		6.35	6.37
20	Nagaland				2.04	2.04
21	Odisha	20	3.5		26.02	49.52
22	Punjab		91.59		48.98	140.57
23	Rajasthan	5351.77	329.44	828.4	322.68	6832.29
24	Sikkim		2.69		1.92	4.61
25	Tamil Nadu	529.38	8.55		54.04	591.97
26	Telangana	493.7	64.95		8.71	567.36
27	Tripura				5.48	5.48
28	Uttar Pradesh	396.25	1.53		134.15	531.93
29	Uttarakhand	43.62	149.08		12.43	205.13
30	West Bengal		3.2		12.96	16.16
31	Andaman & Nicobar				0.27	0.27
32	Chandigarh		9.2		0.81	10.01
33	DD & DNH		0.17			0.17
34	Delhi		16.69		1.46	18.15
35	Lakshadweep				2.52	2.52
36	Puducherry	0.78	3.41		0.18	4.37
37	Other-NABARD				45.01	45.01
Total		9319.17	2205.96	828.40	1557.65	13911.18

Annexure-II referred to in reply to part (a) of Rajya Sabha Unstarred Question No. 1904 for 04.08.2026

District wise details installed solar capacity in the State of Andhra Pradesh

Sr.No.	District	Capacity (MW)
1	Anakapalli	1.4
2	Ananthapuramu	1356.5
3	Annamayya	20
4	Chittoor	231
5	East Godavari	8
6	Eluru	1.2
7	Guntur	10.6
8	Konaseema	5
9	Krishna	13.4
10	Kurnool	1262.9
11	Nandyala	1177.2
12	NTR	1
13	Palnadu	48.2
14	Prakasam	30.4
15	SPSR Nellore	54.5
16	Sri Satya Sai	579
17	Srikakulam	38.9
18	Tirupati	22.8
19	Visakhapatnam	49
20	Vizianagaram	27.1
21	West Godavari	14.6
22	YSR Kadapa	1833.9
23	YSR Kadapa & Nandyala	300
	Total	7086.6