GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
STARRED QUESTION NO. 47
ANSWERED ON 22.07.2026

STUDY ON POTENTIAL OF AGRIVOLTAICS

*47 SHRI DAGGUMALLA PRASADA RAO

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

(a) the total installed capacity of solar power plants in the country during the last five years, category-wise (ground-mounted, rooftop, agrivoltaics), State and district-wise for Andhra Pradesh;

(b) whether the Government has studied the potential of innovative models like agrivoltaics to improve land-use efficiency and if so, the details of findings thereof;

(c) whether the Government has developed or intends to develop official definitions and standards for agrivoltaics and integrated solar systems and if so, the details thereof; and

(d) whether the Government proposes to launch a national-level research or deployment programme for agrivoltaics and if so, the details of funding, implementation timelines and expected outcomes particularly for high-potential States like Andhra Pradesh?

ANSWER

THE MINISTER OF NEW & RENEWABLE ENERGY AND CONSUMER AFFAIRS, & FOOD AND PUBLIC DISTRIBUTION

(SHRI PRALHAD JOSHI)

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

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STATEMENT REFERRED TO IN REPLY TO LOK SABHA STARRED QUESTION NO. *47 FOR ANSWER ON 22.07.2026

(a) to (d) 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**.

The National Institute of Solar Energy (NISE), in collaboration with the Indian Council of Agricultural Research (ICAR)–Indian Agricultural Research Institute (IARI), has established a Centre of Excellence (CoE) on Agrivoltaics for undertaking research, demonstration and capacity-building activities relating to agrivoltaics. The CoE has undertaken pilot activities in agrivoltaics, including installation of a 100 kW agrivoltaic system at ICAR-IARI. Similar 37 number of pilots are also established by different research institutes, agriculture universities and other private stakeholders throughout the country.

Studies undertaken by third-party institutions, including The Energy and Resources Institute (TERI), 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.

NISE and ICAR have been engaged for studies relating to agrivoltaics, including assessment of the suitability of different crops under agrivoltaic systems across different agro-climatic conditions.

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.

Under Component A of PM KUSUM scheme it is allowed to set up decentralized ground mounted grid connected solar power plants in stilt fashion as Agrivoltaics, by the farmers on their land.

Currently no proposal has been received for installation of Agrivoltaics plant under Component A of the scheme from the state of Andhra Pradesh.

Annexure I

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

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**