

GOVERNMENT OF INDIA  
MINISTRY OF NEW AND RENEWABLE ENERGY  
**LOK SABHA**  
**UNSTARRED QUESTION NO. 3054**  
ANSWERED ON 04.08.2022

**SOLAR ENERGY POTENTIAL AND ITS INSTALLED CAPACITY**

+3054. SHRIMATI DELKAR KALABEN MOHANBHAI  
SHRI ARVIND GANPAT SAWANT  
SHRI VINAYAK RAUT

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

- (a) the details of solar energy potential and its installed capacity during the last five years and the current year, State/UT-wise including Dadra and Nagar Haveli, Daman and Diu and Maharashtra;
- (b) the details of the capacity utilization of solar energy along with the growth rate and low capacity utilization during the said period, State/UT-wise;
- (c) whether the Government has set more targets to enhance solar capacity and its utilization in the country and if so, the details thereof;
- (d) the time by which the above targets are likely to be achieved and the mechanism put in place for fixing accountability;
- (e) the steps being taken by the Government to enhance the solar capacity and its utilization along with the outcomes thereof, State/UT-wise;
- (f) whether the International Solar Alliance has been a successful initiative; and
- (g) if so, the details thereof along with the progress made regarding solar grid?

**ANSWER**

**THE MINISTER OF NEW & RENEWABLE ENERGY AND POWER**

**(SHRI R.K. SINGH)**

(a) The State/UT-wise details of solar power potential and installed capacity in the country including Dadra and Nagar Haveli, Daman and Diu and Maharashtra during the last five years and the current year are given at **Annexure-I** and **Annexure-II** respectively.

(b) The capacity utilization factor of solar power projects varies from 21% to 28% depending upon solar radiation, technology used and other related factors.

The cumulative solar power installed capacity has increased from 13,114 MW as on 30-06-2017 to 57,705 MW as on 30-06-2022. State/UT-wise details are given at **Annexure-III**.

(c)&(d) The Government is working towards achieving 500 GW of installed capacity from non-fossil fuels by 2030, in line with the Hon'ble Prime Minister's announcement at CoP-26.

The Government monitors the progress of Renewable Energy capacity addition on a continuous basis including through periodical meetings with States, Implementing Agencies and other stakeholders, and receives feedback for taking corrective measures, as needed.

(e) The Government has taken several steps to promote Renewable Energy including solar energy in the country. These include :

- Permitting Foreign Direct Investment (FDI) up to 100 percent under the automatic route,
- Waiver of Inter State Transmission System (ISTS) charges for inter-state sale of solar and wind power for projects to be commissioned by 30<sup>th</sup> June 2025,
- Declaration of trajectory for Renewable Purchase Obligation (RPO) up to the year 2029-30,
- Setting up of Ultra Mega Renewable Energy Parks to provide land and transmission to RE developers on a plug and play basis,
- Schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), Solar Rooftop Phase-II, 12000 MW CPSU Scheme Phase-II etc.
- Laying of new transmission lines and creating new sub-station capacity under the Green Energy Corridor Scheme for evacuation of renewable power,
- Setting up of Project Development Cell for attracting and facilitating investments,
- Standard Bidding Guidelines for tariff based competitive bidding process for procurement of Power from Grid Connected Solar PV and Wind Projects.
- Government has issued orders that power shall be dispatched against Letter of Credit (LC) or advance payment to ensure timely payment by distribution licensees to RE generators.

All these have resulted in solar power capacity installation of 57,705 MW in the country. State/UT-wise details as on 30.06.2022, are given at **Annexure-IV**.

(f) &(g) International Solar Alliance (ISA) was launched by Hon'ble Prime Minister of India and the then President of France in 2015. ISA is the first international, intergovernmental organization headquartered in India. In 2016, 15 countries had signed the framework agreement of ISA. This figure now stands at 107. In 2021, United Nations accorded observer status to ISA. ISA has launched eight thematic programmes dedicated to at-scale deployment of cross-sectoral applications of solar energy. ISA aims to mobilize over USD 1000 billion of investment in solar projects by 2030.

ISA is also acting as the nodal agency for a study on 'One Sun One World One Grid' (OSOWOG)' for developing the long-term vision, implementation plan, road map and institutional framework for the OSOWOG project. The draft report for the first phase has been received and the final report is expected by end of 2022. OSOWOG envisages interconnections of Renewable Energy generators and loads across international borders.

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**ANNEXURE-I REFERRED TO IN REPLY TO PART (a) OF LOK SABHA  
UNSTARRED QUESTION NO. 3054 FOR 04.08.2022**

**STATE/UT-WISE DETAILS OF SOLAR POWER POTENTIAL**

<b>Sl. No.</b>	<b>State/UTs</b>	<b>Solar Power Potential (GWp)</b>
1.	Andhra Pradesh	38.44
2.	Arunachal Pradesh	8.65
3.	Assam	13.76
4.	Bihar	11.20
5.	Chhattisgarh	18.27
6.	Delhi	2.05
7.	Goa	0.88
8.	Gujarat	35.77
9.	Haryana	4.56
10.	Himachal Pradesh	33.84
11.	Jammu & Kashmir	111.05
12.	Jharkhand	18.18
13.	Karnataka	24.70
14.	Kerala	6.11
15.	Madhya Pradesh	61.66
16.	Maharashtra	64.32
17.	Manipur	10.63
18.	Meghalaya	5.86
19.	Mizoram	9.09
20.	Nagaland	7.29
21.	Odisha	25.78
22.	Punjab	2.81
23.	Rajasthan	142.31
24.	Sikkim	4.94
25.	Tamil Nadu	17.67
26.	Telangana	20.41
27.	Tripura	2.08
28.	Uttar Pradesh	22.83
29.	Uttarakhand	16.80
30.	West Bengal	6.26
31.	UTs	0.79
<b>TOTAL</b>		<b>748.98</b>

**ANNEXURE-II REFERRED TO IN REPLY TO PART (a) OF LOK SABHA  
UNSTARRED QUESTION NO. 3054 FOR 04.08.2022**

**STATE/UT-WISE DETAILS OF SOLAR POWER INSTALLED CAPACITY IN THE  
COUNTRY DURING LAST FIVE YEARS AND THE CURRENT YEAR**

**Up to 30-06-2022)**

<b>Sr. No.</b>	<b>State/UT</b>	<b>Capacity installed (in MW),</b>
1	Andaman & Nicobar	23.35
2	Andhra Pradesh	2523.26
3	Arunachal Pradesh	10.97
4	Assam	131.16
5	Bihar	82.17
6	Chandigarh	39.53
7	Chhattisgarh	400.46
8	<b>Dadra &amp; Nagar Haveli</b>	<b>2.49</b>
9	<b>Daman &amp; Diu</b>	<b>30.54</b>
10	Delhi	159.35
11	Goa	20.83
12	Gujarat	6547.70
13	Haryana	850.21
14	Himachal Pradesh	79.83
15	Jammu & Kashmir	51.11
16	Jharkhand	65.51
17	Karnataka	6569.02
18	Kerala	465.13
19	Ladakh	3.23
20	Lakshadweep	2.52
21	Madhya Pradesh	1889.24
22	<b>Maharashtra</b>	<b>2291.68</b>
23	Manipur	12.23
24	Meghalaya	4.14
25	Mizoram	7.90
26	Nagaland	2.54
27	Odisha	372.72
28	Puducherry	35.46
29	Punjab	316.52
30	Rajasthan	12640.42
31	Sikkim	4.68
32	Tamil Nadu	3995.87
33	Telangana	3334.09
34	Tripura	10.78
35	Uttar Pradesh	1907.28
36	Uttarakhand	338.25
37	West Bengal	149.74
38	Others including NABARD	45.01
<b>TOTAL</b>		<b>45416.92</b>

**ANNEXURE-III REFERRED TO IN REPLY TO PART (b) OF LOK SABHA  
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**STATE/UT-WISE DETAILS OF SOLAR INSTALLED CAPACITY ADDITION IN THE  
COUNTRY DURING LAST FIVE YEARS (IN MW)**

Sr. No.	State/UT	Capacity as on 30-06-2017	Capacity as on 30-06-2022
1	Andaman & Nicobar	6.56	29.91
2	Andhra Pradesh	2010.87	4390.48
3	Arunachal Pradesh	0.27	11.23
4	Assam	11.78	142.94
5	Bihar	111.52	190.69
6	Chandigarh	17.32	56.85
7	Chhattisgarh	128.86	529.32
8	<b>Dadra &amp; Nagar Haveli</b>	2.97	<b>5.46</b>
9	<b>Daman &amp; Diu</b>	10.46	<b>41.01</b>
10	Delhi	40.27	211.12
11	Goa	0.71	21.54
12	Gujarat	1262.10	7806.80
13	Haryana	81.40	943.61
14	Himachal Pradesh	0.73	80.56
15	Jammu & Kashmir	1.36	47.90
16	Jharkhand	23.27	88.79
17	Karnataka	1180.38	7597.92
18	Kerala	74.20	539.60
19	Ladakh	0.00	7.80
20	Lakshadweep	0.75	3.27
21	Madhya Pradesh	857.04	2746.27
22	<b>Maharashtra</b>	<b>452.37</b>	<b>2753.30</b>
23	Manipur	0.03	12.26
24	Meghalaya	0.01	4.16
25	Mizoram	0.10	8.01
26	Nagaland	0.50	3.04
27	Odisha	79.42	452.13
28	Puducherry	0.08	35.53
29	Punjab	809.45	1117.99
30	Rajasthan	1961.22	14454.70
31	Sikkim	0.00	4.69
32	Tamil Nadu	1697.32	5690.79
33	Telangana	1609.27	4621.07
34	Tripura	5.09	15.87
35	Uttar Pradesh	359.00	2244.56
36	Uttarakhand	233.49	573.54
37	West Bengal	26.14	176.00
38	Other including NABARD	58.31	45.01
<b>Total</b>		<b>13114.62</b>	<b>57705.72</b>

**ANNEXURE-IV REFERRED TO IN REPLY TO PART (e) OF LOK SABHA  
UNSTARRED QUESTION NO. 3054 FOR 04.08.2022**

**STATE/UT-WISE DETAILS OF SOLAR CAPACITY INSTALLED IN THE COUNTRY  
(IN MW, AS ON 30-06-2022)**

<b>Sr. No.</b>	<b>State/UT</b>	<b>Capacity installed</b>
1	Andaman & Nicobar	29.91
2	Andhra Pradesh	4390.48
3	Arunachal Pradesh	11.23
4	Assam	142.94
5	Bihar	190.69
6	Chandigarh	56.85
7	Chhattisgarh	529.32
8	<b>Dadra &amp; Nagar Haveli</b>	<b>5.46</b>
9	<b>Daman &amp; Diu</b>	<b>41.01</b>
10	Delhi	211.12
11	Goa	21.54
12	Gujarat	7806.80
13	Haryana	943.61
14	Himachal Pradesh	80.56
15	Jammu & Kashmir	47.90
16	Jharkhand	88.79
17	Karnataka	7597.92
18	Kerala	539.60
19	Ladakh	7.80
20	Lakshadweep	3.27
21	Madhya Pradesh	2746.27
22	<b>Maharashtra</b>	<b>2753.30</b>
23	Manipur	12.26
24	Meghalaya	4.16
25	Mizoram	8.01
26	Nagaland	3.04
27	Odisha	452.13
28	Puducherry	35.53
29	Punjab	1117.99
30	Rajasthan	14454.70
31	Sikkim	4.69
32	Tamil Nadu	5690.79
33	Telangana	4621.07
34	Tripura	15.87
35	Uttar Pradesh	2244.56
36	Uttarakhand	573.54
37	West Bengal	176.00
38	Others including NABARD	45.01
<b>TOTAL</b>		<b>57705.72</b>