

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 1407
ANSWERED ON 10.02.2022

UTILISATION OF SOLAR ENERGY CAPACITY

1407. SHRI RAJIV PRATAP RUDY

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

- (a) the details of the potential and installed capacity of solar energy during the last four years, State/UT-wise including Bihar;
- (b) the details of the capacity utilisation of solar energy along with the growth rate and capacity under-utilised during the said period, State/UT-wise including Bihar;
- (c) whether the National Solar Mission was successful and if so, the details along with achievements in Bihar thereof;
- (d) whether the International Solar Alliance was a successful initiative and if so, the details thereof along with the progress made on the solar grid;
- (e) whether the Government has set further targets to increase the solar capacity and utilisation in the country, if so, the detail thereof along with timeline of implementation and mechanism for accountability; and
- (f) the steps taken by the Government to increase solar capacity and utilisation in Bihar and the outcome thereof ?

ANSWER

THE MINISTER OF NEW & RENEWABLE ENERGY AND POWER

(SHRI R.K. SINGH)

- (a) The details of the state-wise solar potential & installed solar capacity during the last four years in the country including Bihar are given at **Annexure-I and Annexure-II** respectively.
- (b) The solar potential and capacity installed in the county including Bihar is given at **Annexure-III**.
- (c) Yes, sir. The installed solar capacity was only 11.36 MW till March 2010. Because of the launch of NSM in January 2010, the installed grid-connected solar capacity in the country including Bihar as on 31-12-2021 has now reached 48,088 MW. The State-wise details of solar capacity installed, including in Bihar, are at **Annexure-III**.
- (d) At present, a total of 102 countries have signed the Framework Agreement of the International Solar Alliance (ISA).
The ISA Secretariat has launched nine programmes for promotion of affordable solar energy solutions for achievement of sustainable development goals.
- (e) & (f) Under Nation Solar Mission, the target of grid connected solar projects is 100 GW by December 2022. The Government has taken various steps for promotion of renewable energy including solar energy in the country including Bihar. The details are given at **Annexure-IV**.

State-wise details of estimated potential of Solar Energy (in MWp)

Sl. No.	State/UT	Solar Potential (in MWp)#
1.	Andhra Pradesh	38440
2.	Arunachal Pradesh	8650
3.	Assam	13760
4.	Bihar	11200
5.	Chhattisgarh	18270
6.	Delhi	2050
7.	Goa	880
8.	Gujarat	35770
9.	Haryana	4560
10.	Himachal Pradesh	33840
11.	Jammu & Kashmir	111050
12.	Jharkhand	18180
13.	Karnataka	24700
14.	Kerala	6110
15.	Madhya Pradesh	61660
16.	Maharashtra	64320
17.	Manipur	10630
18.	Meghalaya	5860
19.	Mizoram	9090
20.	Nagaland	7290
21.	Odisha	25780
22.	Punjab	2810
23.	Rajasthan	142310
24.	Sikkim	4940
25.	Tamil Nadu	17670
26.	Telangana	20410
27.	Tripura	2080
28.	Uttar Pradesh	22830
29.	Uttarakhand	16800
30.	West Bengal	6260
31.	Other UTs	790
TOTAL		748990

Assessed by National Institute of Solar Energy

Annexure-II**Year-wise grid connected solar capacity addition in last four years (in MW)**

Sl. No.	State/UT	2017-18	2018-19	2019-20	2020-21
1	Andaman & Nicobar	0.00	5.17	0.46	17.03
2	Andhra Pradesh	328.24	890.22	524.34	592.98
3	Arunachal Pradesh	5.13	0.00	0.22	0.00
4	Assam	0.67	9.95	18.83	1.76
5	Bihar	33.93	0.00	9.12	7.94
6	Chandigarh	7.88	9.51	5.84	4.61
7	Chhattisgarh	102.49	0.00	0.00	21.13
8	Dadar & Nagar	2.49	0.00	0.00	0.00
9	Daman & Diu	0.15	3.86	5.39	20.68
10	Delhi	17.80	57.32	38.27	27.81
11	Goa	0.20	2.98	0.89	2.66
12	Gujarat	328.89	852.13	508.24	1482.45
13	Haryana	123.45	7.67	27.62	155.69
14	Himachal Pradesh	0.00	21.95	10.25	9.80
15	Jammu & Kashmir	0.00	13.47	4.47	0.00
16	Jharkhand	2.39	9.28	3.45	13.66
17	Karnataka	3915.22	1151.43	1182.37	77.24
18	Kerala	33.46	30.65	3.64	114.77
19	Ladakh	0.00	0.00	0.00	1.43
20	Lakshadweep	0.00	0.00	0.00	0.00
21	Madhya Pradesh	448.31	534.81	418.30	204.76
22	Maharashtra	777.56	394.36	168.26	488.17
23	Manipur	0.03	3.38	1.72	1.20
24	Meghalaya	0.01	0.10	0.00	0.00
25	Mizoram	0.10	0.30	1.02	0.01
26	Nagaland	0.50	0.00	0.00	0.00
27	Odisha	0.15	315.16	3.11	3.88
28	Pondicherry	0.08	2.98	2.37	3.82
29	Punjab	104.15	0.00	41.48	12.40
30	Rajasthan	518.49	894.02	1911.12	594.67
31	Sikkim	0.00	0.01	0.06	0.00
32	Tamil Nadu	213.65	666.65	1340.66	559.33
33	Telangana	2004.27	300.84	28.66	332.37
34	Tripura	0.00	0.00	4.32	0.00
35	Uttar Pradesh	357.13	265.69	135.00	617.40
36	Uttarakhand	24.79	46.67	9.15	52.51
37	West Bengal	11.06	38.63	38.51	35.38
TOTAL		9362.67	6529.19	6447.14	5457.54

**State-wise solar potential and grid connected solar capacity installed
as on 31-12-2021**

Sl. No.	State/UT	Solar Potential (MWp) #	Capacity installed (in MW)
1.	Andhra Pradesh	38440	4292.37
2.	Arunachal Pradesh	8650	5.61
3.	Assam	13760	59.15
4.	Bihar	11200	169.48
5.	Chhattisgarh	18270	308.83
6.	Delhi	2050	209.66
7.	Goa	880	18.37
8.	Gujarat	35770	6206.34
9.	Haryana	4560	593.20
10.	Himachal Pradesh	33840	45.04
11.	Jammu & Kashmir	111050	24.49
12.	Jharkhand	18180	53.56
13.	Karnataka	24700	7496.81
14.	Kerala	6110	306.30
15.	Madhya Pradesh	61660	2592.16
16.	Maharashtra	64320	2506.81
17.	Manipur	10630	6.36
18.	Meghalaya	5860	0.19
19.	Mizoram	9090	1.53
20.	Nagaland	7290	1.00
21.	Odisha	25780	405.22
22.	Punjab	2810	1051.09
23.	Rajasthan	142310	9979.72
24.	Sikkim	4940	2.76
25.	Tamil Nadu	17670	4757.76
26.	Telangana	20410	4154.42
27.	Tripura	2080	9.41
28.	Uttar Pradesh	22830	1990.28
29.	Uttarakhand	16800	540.49
30.	West Bengal	6260	151.00
31.	Other UTs	790	148.46
TOTAL		748990	48087.87

Assessed by National Institute of Solar Energy

**Various steps taken by the Government to promote renewable energy
including solar energy in the Country including Bihar**

- 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 30th June 2025,
- Declaration of trajectory for Renewable Purchase Obligation (RPO) up to the year 2022,
- Setting up of Ultra Mega Renewable Energy Parks to provide land and transmission to RE developers on a plug and play basis,
- Introduced various schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), Solar Rooftop Phase II, 12000 MW CPSU Scheme Phase II, Production Linked Incentive(PLI) scheme for promoting solar manufacturing etc,
- Laying of new transmission lines and creating new sub-station capacity under the Green Energy Corridor Scheme for evacuation of renewable power,
- Notification of standards for deployment of solar photovoltaic system/devices,
- 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.