

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 1073
ANSWERED ON 08/02/2024

INSTALLED CAPACITY OF RENEWABLE ENERGY

1073. SHRIMATI RANJEETA KOLI
SHRI DUSHYANT SINGH
SHRI SUMEDHANAND SARASWATI
DR. MANOJ RAJORIA

Will the Minister of New and Renewable Energy be pleased to state:

- (a) whether there is any change in total solar capacity of the country from 2014-15;
- (b) if so, the details of overall installed capacity of renewable energy as of March 31, 2023, State-wise;
- (c) the accumulated capacity of installed renewable energy in megawatts, excluding large hydro power, year-wise;
- (d) whether the Government proactively engaged in developing sustainable renewable energy and if so, the details thereof;
- (e) whether the Government proposes any initiative regarding Mission LiFE and to promote Reduce, Reuse and Recycle practices in the country's energy sector and if so, the details thereof; and
- (f) the status of the scheme for Solar Parks and Ultra Mega Solar Power Projects, particularly in the State of Rajasthan?

ANSWER

THE MINISTER OF NEW & RENEWABLE ENERGY AND POWER
(SHRI R.K. SINGH)

- (a) The solar power installed capacity in the country has increased from 2.82 GW as on 31.03.2014 to 73.32 GW as on 31.12.2023.
- (b) The details of overall installed capacity of renewable energy as of March 31, 2023, State-wise is given at **Annexure-I**
- (c) The accumulated capacity of installed renewable energy in megawatts, excluding large hydro power, year-wise in the last five years is given at **Annexure-II**
- (d) The details of the steps taken/being taken by the Government in developing sustainable renewable energy in the country, are given at **Annexure-III**.
- (e) Ministry of Environment, Forest and Climate Change, Government of India has notified the E-Waste (Management) Rules, 2022 on 2nd November, 2022. As per these rules, every manufacturer and producer of solar photo-voltaic modules or panels or cells shall:-
 - i. ensure registration on the portal;
 - ii. store solar photo-voltaic modules or panels or cells waste generated up to the year 2034- 2035 as per the guidelines laid down by the Central Pollution Control Board in this regard;

- iii. file annual returns in the laid down form on the portal on or before the end of the year to which the return relates up to year 2034-2035;
- iv. ensure that the processing of the waste other than solar photo-voltaic modules or panels or cells shall be done as per the applicable rules or guidelines for the time being in force;
- v. ensure that the inventory of solar photo-voltaic modules or panels or cells shall be put in place distinctly on portal;
- vi. comply with standard operating procedure and guidelines laid down by the Central Pollution Control Board in this regard.

Further, the recycler of solar photo-voltaic modules or panels or cells shall be mandated for recovery of material as laid down by the Central Pollution Control Board in this regard.

The E-Waste (Management) Rules, 2022 provides that the Department of Industry in the State and Union territory or any other government agency authorized in this regard by the State Government or the Union territory, as the case may be, shall ensure earmarking or allocation of industrial space or shed for e-waste dismantling and recycling in the existing and upcoming industrial park, estate and industrial clusters.

(f) So far, 58 Solar Parks with an aggregate capacity of 40,000 MW have been sanctioned in 13 States in the country. An aggregate capacity of 10,576 MW of solar projects have been commissioned in 20 Solar Parks, so far. The Details of all states including Rajasthan are given at **Annexure IV**

**ANNEXURE- I REFERRED TO IN REPLY TO PART (b) OF
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State-wise installed capacity of Renewable Energy (as on 31.12.2023)

S. No.	STATES / UTs	Installed Capacity of Renewable Energy in MW
1	Andhra Pradesh	9391.95
2	Arunachal Pradesh	144.90
3	Assam	191.92
4	Bihar	420.26
5	Chhattisgarh	1423.24
6	Goa	37.75
7	Gujarat	21977.01
8	Haryana	1579.67
9	Himachal Pradesh	1091.46
10	Jammu & Kashmir	216.41
11	Jharkhand	139.92
12	Karnataka	18197.07
13	Kerala	1194.53
14	Ladakh	48.79
15	Madhya Pradesh	6272.99
16	Maharashtra	13263.73
17	Manipur	18.49
18	Meghalaya	73.02
19	Mizoram	75.90
20	Nagaland	35.84
21	Odisha	647.88
22	Punjab	1973.60
23	Rajasthan	24120.05

24	Sikkim	59.80
25	Tamil Nadu	18956.96
26	Telangana	5152.32
27	Tripura	34.48
28	Uttar Pradesh	5011.61
29	Uttarakhand	934.09
30	West Bengal	636.02
31	Andaman & Nicobar	35.16
32	Chandigarh	64.05
33	Dadar & Nagar Haveli and Daman & Diu	46.47
34	Delhi	321.29
35	Lakshadweep	4.97
36	Puducherry	43.27
37	Others	49.31
	Total (MW)	133886.18

**ANNEXURE II REFERRED TO IN REPLY TO PART (c) OF LOK SABHA
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**Year wise cumulative renewable energy capacity from the year 2019-20 to 2023-24
(upto Dec 2023)**

S.N.	Year	Added capacity (MW)	Cumulative Renewable Energy Capacity Installed (MW)
1	2019-20	8843	88255
2	2020-21	7548	95803
3	2021-22	14082	109885
4	2022-23	15274	125159
5	2023-24 (upto Dec 2023)	8727	133886

ANNEXURE-III REFERRED TO IN REPLY TO PART (d) OF LOK SABHA

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Details of measures taken to promote Solar Power Plants in the Country

- Notification of prescribed trajectory for RE power bids to be issued by Renewable Energy Implementation Agencies from FY 2023-24 to FY 2027-28. Under the trajectory, 50 GW/annum of RE bids to be issued.
- 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 2029-30,
- 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.
- Notification of Promoting Renewable Energy through Green Energy Open Access Rules 2022.
- Notification of "The Electricity (Late Payment Surcharge and related matters) Rules (LPS rules).
- Launch of Green Term Ahead Market (GTAM) to facilitate sale of Renewable Energy Power through exchanges.
- Launch of a National Portal where residential consumers from any part of the country can apply for the installation of rooftop solar and get subsidies directly into their bank account under the Programme
- Development of online portals at the DISCOM level and aggregation of demand relating to RTS projects.
- Electricity (Rights of Consumers) Rules, 2020 has been issued for net-metering up to five hundred Kilowatt or up to the electrical sanctioned load, whichever is lower.
- Quality standards for deployment of solar photovoltaic systems/devices notified.
- Information and public awareness activities through various mediums.

ANNEXURE- IV REFERRED TO IN REPLY TO PART (f) OF LOK SABHA**UNSTARRED QUESTION NO.1073 FOR 08.02.2024****List of Solar Parks sanctioned and projects commissioned**

Sl. No.	State	Number of Parks	Sanctioned Capacity (MW)	Projects commissioned (in MW)
1	Andhra Pradesh	5	4200	3050
2	Chhattisgarh	1	100	100
3	Gujarat	7	12150	900
4	Himachal Pradesh	1	53	-
5	Jharkhand	3	1089	-
6	Karnataka	2	2500	2000
7	Kerala	3	255	100
8	Madhya Pradesh	9	4780	1000
9	Maharashtra	4	1105	-
10	Mizoram	1	20	20
11	Odisha	3	340	-
12	Rajasthan	10	9568	3065
13	Uttar Pradesh	9	3840	341
Total		58	40000	10576