

**GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.4703
ANSWERED ON 31.03.2022**

SOURCES USED TO GENERATE ELECTRICITY

4703. SHRIMATI MANEKA SANJAY GANDHI:

**Will the Minister of POWER
be pleased to state:**

- (a) the details of sources used to generate electricity in the country during the last three years and the current year, percentage-wise;**
- (b) whether there is an under utilisation of the existing renewable capacity for the generation of power;**
- (c) if so, the details thereof; and**
- (d) the immediate steps taken/being taken by the Government to reduce the dependence on coal based on the country's COP26 commitments?**

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : Details of source-wise Installed Capacity during the last 3 years and the current year (upto February, 2022) are given at Annexure-I.

(b) to (d) : Renewable energy is categorized as a Must Run. Details of Source-wise Renewable Energy generation during the last 3 years and the current year (upto January, 2022) are given at Annexure-II. The steps taken by the Central Government to promote renewable energy in the country are given at Annexure-III.

As on 28.02.2022, a total of about 152.899 Gigawatt (GW) of renewable energy capacity (including large hydro) has been installed in the country. The renewable energy capacity including large hydro is expected to be around 500 GW by the year 2030.

In order to reduce the dependence on coal, based on the Country's COP26 commitment, more generation capacity will be added in Renewable & Nuclear sources to achieve the target of 500 GW from non-fossil fuel sources. With this addition, the share of coal based generation capacity is likely to reduce from 51.5 % as on 28.02.2022 to 31.8 % as on 31.03.2030.

ANNEXURE-I**ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 4703
ANSWERED IN THE LOK SABHA ON 31.03.2022**

**Details of source-wise Installed Capacity during the last 3 years and current the year
(upto February, 2022)**

Source/ Fuel	As on 28.02.2022		As on 31.03.2021		As on 31.03.2020		As on 31.03.2019	
	Capacity (MW)	% Share	Capacity (MW)	% Share	Capacity (MW)	% Share	Capacity (MW)	% Share
Thermal								
Coal	203899.50	51.54	202674.50	53.04	198524.50	53.64	194444.50	54.60
Lignite	6620.00	1.67	6620.00	1.73	6610.00	1.79	6260.00	1.76
Gas	24899.51	6.29	24924.01	6.52	24955.36	6.74	24937.22	7.00
Diesel	509.71	0.13	509.71	0.13	509.71	0.14	637.63	0.18
Thermal Total	235928.72	59.64	234728.22	61.42	230599.57	62.31	226279.34	63.54
Nuclear	6780.00	1.71	6780.00	1.77	6780.00	1.83	6780.00	1.90
RES								
Hydro	46524.52	11.76	46209.22	12.09	45699.22	12.35	45399.22	12.75
RES (MNRE)								
Small Hydro Power	4839.90	1.22	4786.81	1.25	4683.16	1.27	4593.15	1.29
Wind Power	40129.78	10.14	39247.05	10.27	37693.75	10.18	35625.97	10.00
-BM Power/Cogen.	10175.61	2.57	10145.92	2.65	9875.31	2.67	9103.50	2.56
-Waste to Energy	451.57	0.11	168.64	0.04	147.64	0.04	138.30	0.04
Solar Power	50777.77	12.84	40085.37	10.49	34627.82	9.36	28180.71	7.91
RES (MNRE) Total	106374.63	26.89	94433.79	24.71	87027.68	23.51	77641.63	21.80
RES Total	152899.15	38.65	140643.01	36.80	132726.90	35.86	123040.85	34.55
All India Total	395607.86	100.00	382151.22	100.00	370106.46	100.00	356100.19	100.00

ANNEXURE-II**ANNEXURE REFERRED TO IN REPLY TO PARTS (b) TO (d) OF UNSTARRED QUESTION NO. 4703 ANSWERED IN THE LOK SABHA ON 31.03.2022**

Details of Source-wise RE Generation during the last 3 years and the current year (upto January 2022)

Year	Wind	Solar	Biomass	Bagasse	Small Hydro	Others	Renewable Energy Total	Large Hydro *	Total RE Including Large Hydro
2018-19	62036.38	39268.19	2763.82	13562.67	8702.75	425.28	126759.09	134893.61	261652.70
2019-20	64646.38	50131.09	2937.97	10804.46	9451.24	365.88	138337.02	155769.12	294106.14
2020-21	60149.95	60402.26	3512.98	11302.85	10258.41	1621.06	147247.51	150299.52	297547.03
2021-22 (up to January 22)	61525.49	57869.53	2867.92	8542.98	1875.76	9256.86	141938.54	133610.06	275548.60

*** Large hydro generation Excluding Import from Bhutan**

ANNEXURE REFERRED TO IN REPLY TO PARTS (b) TO (d) OF UNSTARRED QUESTION NO.4703 ANSWERED IN THE LOK SABHA ON 31.03.2022

The following steps are taken by Central Government to promote renewable energy in the country:

- i. Permitting Foreign Direct Investment (FDI) up to 100 percent under the automatic route;**
- ii. 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;**
- iii. Laying of new transmission lines and creating new sub-station capacity for evacuation of renewable power;**
- iv. Declaration of trajectory for Renewable Purchase Obligation (RPO) up to the year 2022;**
- v. Setting up of RE parks to provide land and transmission to RE developers on a plug and play basis;**
- vi. Schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), Solar Rooftop Phase II, 12000 MW CPSU Scheme Phase II, etc.;**
- vii. Notification of standards for deployment of solar photovoltaic system/devices;**
- viii. Setting up of Project Development Cell for attracting and facilitating investments;**
- ix. Standard Bidding Guidelines for tariff based competitive bidding for procurement of Power from Grid Connected Solar PV and Wind Projects; and**
- x. 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.**
