

GOVERNMENT OF INDIA
MINISTRY OF POWER
RAJYA SABHA
UNSTARRED QUESTION NO.2237
ANSWERED ON 22.03.2022

ELECTRICITY GENERATION THROUGH VARIOUS MEANS

2237 SHRI JOHN BRITTAS:

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

- (a) the details of Government policy with regard to optimum balancing of different types of electricity generation in the country;
- (b) the ratio of power generated from hydro, thermal, nuclear and non-conventional methods; and
- (c) the details of average cost of electricity production in different streams?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : The focus of Government policy measures is to meet demand of electricity and also reduce carbon footprint of power sector. Towards this end, Government has taken measures to promote generation from renewable sources of power. Since solar and wind, which are dominant sources of renewable generation are variable in nature, policy measures are also directed towards balancing such variation by having storage based hydro and energy storage systems. Central Electricity Authority has carried out a study to determine the optimal generation mix by 2030, keeping in view the energy transition policies of the Government.

(b) : The ratio of power generated from hydro, thermal, nuclear and non-conventional during the last three years and current year (up to January, 2022) is given at **Annexure-I**.

(c): The details of average cost of electricity production in different streams are given at **Annexure-II**.

ANNEXURE-I**ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION
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Details of generation of power source-wise (Conventional & Renewable) & their ratio from the year 2018-19 to 2021-22 (up to Jan.,2022)

Source Category	Generation (MU)			
	2018-19	2019-20	2020-21	2021-22 (Up to Jan. 22)
THERMAL	1072224	1042748	1032514	913021.82
NUCLEAR	37812.59	46472.45	43029.08	38894.1
HYDRO (25 MW & above)	134893.6	155769.1	150299.5	133610.06
IMPORT FROM BHUTAN	4406.62	5794.48	8765.5	7291.8
Total (Conventional)	1249337	1250784	1234608	1092817.78
Non-Conventional	126759.1	138337	147247.5	141938.55
Total (Conventional+ Non-Conventional)	1376096	1389121	1381855	1234756.33
% of THERMAL	77.92	75.07	74.72	73.94
% of Nuclear	2.75	3.35	3.11	3.15
% of Hydro	9.80	11.21	10.88	10.82
% of Non-Conventional	9.21	9.96	10.66	11.50

Note:

1. Gross Generation from conventional sources (Thermal, Nuclear & Hydro) stations of 25 MW and above only.
2. Gross Generation from Non-Conventional sources (Wind, Solar, Biomass, bagasses, Small Hydro and Others).

ANNEXURE-II

**ANNEXURE REFERRED TO IN REPLY TO PART (c) OF UNSTARRED QUESTION
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Weighted Average Rate of Sale of Power (WARSP) during 2019-20

Sr. No.	MODE OF GENERATION/ CATEGORY	WARSP (Paisa / kWh) 2019-20
1	HYDRO	271.48
2	THERMAL	395.78
3	NUCLEAR	314.33
	ALL INDIA (ALL CATEGORY)	378.31
