

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
STARRED QUESTION NO. 226
ANSWERED ON 11/12/2024

ATOMIC POWER PLANTS

*226. KM. SUDHA R

Will the PRIME MINISTER be pleased to state:-

- (a) the number of nuclear and atomic power plants in the country and their capacity, State and Unit-wise along with the capacity utilisation and power output;
- (b) the details of share of atomic power distributed to stake holders, State-wise;
- (c) the details of per-unit production cost of atomic power vis-a-vis other fossil-based and renewable energy;
- (d) the number of atomic power plants under construction in the country, State wise; and
- (e) the number of radiation affected people and employees treated at State and private facilities along with the compensation package given to them, unit and State-wise?

ANSWER

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS
AND PRIME MINISTER'S OFFICE (DR. JITENDRA SINGH)

(a) to (e) A statement is placed on the Table of the House.

Government of India
Department of Atomic Energy

STATEMENT REFERRED TO IN REPLY OF LOK SABHA STARRED QUESTION NO.*226 (6TH POSITION) DUE FOR ANSWER ON 11.12.2024 BY KM. SUDHA R REGARDING ATOMIC POWER PLANTS

- (a) The details are provided in Annexure-A.
- (b) The power generated by central sector power generating stations is allocated to the beneficiary states and union territories in the electricity region by the Ministry of Power (MoP) as per laid down norms. The details are provided in Annexure-B.
- (c) The average tariff of nuclear power in the year 2023-24 was Rs. 3.83 per kWh. The tariffs of electricity generated through nuclear power are comparable to those of the contemporary conventional base load power generating units (like coal based thermal power) located in the area/ region. Renewables like solar and wind are intermittent and their tariffs can be compared with those of base load sources like coal and nuclear only when associated grid and storage costs are factored in.
- (d) There are nine nuclear power reactors at various stages of construction/ commissioning and twelve reactors under pre-project activities. The details are given below:

State	Location	Project	Capacity (MW)
Projects Under Construction / Commissioning			
Rajasthan	Rawatbhata	RAPP-7&8	2 X 700
Tamilnadu	Kudankulam	KKNPP-3&4	2 X 1000
		KKNPP-5&6	2 X 1000
	Kalpakkam	PFBR#	1 x 500
Haryana	Gorakhpur	GHAVP-1&2	2 X 700
Projects Under Pre-project Activities			
Karnataka	Kaiga	Kaiga-5&6	2 X 700
Haryana	Gorakhpur	GHAVP- 3&4	2 X 700
Madhya Pradesh	Chutka	Chutka-1&2	2 X 700
Rajasthan	Mahi Banswara	Mahi Banswara-1&2	2 X 700
		Mahi Banswara-3&4	2 X 700
Tamilnadu	Kalpakkam	FBR – 1& 2 #	2 x 500

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- (e) The radiation dose from nuclear power plants to members of the public has been a negligible fraction of the limit stipulated by AERB. Thus, the question of people being affected by radiation from nuclear power plants requiring treatment and compensation does not arise. As regards employees also, there have been no instances of need for medical treatment for radiation exposure.

Annexure-A

State	Location	Unit	Capacity (MW)	Plant Load Factor (%) (Apr 24 - Oct 24)
Maharashtra	Tarapur	TAPS-1 ^{&}	160	0 ^{&}
		TAPS-2 ^{&}	160	0 ^{&}
		TAPS-3	540	98.82
		TAPS-4	540	99.47
Rajasthan	Rawatbhata	RAPS-1 [@]	100	0 [@]
		RAPS-2	200	91.97
		RAPS-3	220	52.45
		RAPS-4	220	89.88
		RAPS-5	220	95.57
		RAPS-6	220	102.29
Tamil Nadu	Kalpakkam	MAPS-1 ^{&}	220	0 ^{&}
		MAPS-2	220	92.74
	Kudankulam	KKNPP-1	1000	92.93
		KKNPP-2	1000	72.56
Uttar Pradesh	Narora	NAPS-1	220	92.75
		NAPS-2	220	97.73
Gujarat	Kakrapar	KAPS-1	220	77.29
		KAPS-2	220	95.38
		KAPS-3	700	70.43
		KAPS-4	700	67.14
Karnataka	Kaiga	KGS-1	220	95.22
		KGS-2	220	93.04
		KGS-3	220	104.55
		KGS-4	220	108.02

[@] RAPS-1 is under extended shutdown

[&] TAPS-1&2 and MAPS-1 are presently under project mode for refurbishment

Annexure-B

Unit	Capacity (MW)	Allocation from Nuclear Power Stations in the Western Region (% share)						
		Maharashtra	Gujarat	Madhya Pradesh	DNH & DD	Goa	Chhattisgarh	Unallocated
TAPS-1&2	2X160	50.00	50.00	-	-	-	-	-
TAPS-3&4	2X540	36.39	25.37	16.67	1.11	1.02	4.44	15.00
KAPS-1&2	2X220	31.14	28.41	21.14	0.90	3.41	-	15.00
KAPS-3&4	2X700	27.05	33.99	15.64	0.94	1.12	6.26	15.00

Unit	Capacity (MW)	Allocation from Nuclear Power Stations in the Northern Region (% share)									
		Rajasthan	Haryana	J&K & Ladakh	Punjab	Uttar Pradesh	Chandigarh	Delhi	Uttarakhand	Himachal Pradesh	Unallocated
RAPS-1&2	100+200	100.00	-	-	-	-	-	-	-	-	-
RAPS-3&4	2X220	28.41	10.91	7.95	22.73	15.00	-	-	-	-	15.00
RAPS-5&6	2X220	19.94	5.67	-	10.41	19.49	0.68	12.69	3.40	3.40	24.32
NAPS-1&2	2X220	10.00	6.36	7.50	11.59	31.30	1.14	10.68	3.70	3.18	14.55

Unit	Capacity (MW)	Allocation from Nuclear Power Stations in the Southern Region (% share)							
		Andhra Pradesh	Karnataka	Kerala	Tamil Nadu	Telangana	Puducherry	Unallocated	
KGS - 1&2	2X220	12.05	24.55	8.64	23.86	14.08	1.82	15.000	
KGS - 3&4	2X220	12.89	27.05	7.95	20.68	15.06	1.36	15.00	
MAPS - 1&2	2X220	3.98	6.59	5.23	74.32	4.65	1.14	4.09	
KKNPP - 1&2	2X1000	-	22.10	13.30	46.25	-	3.35	15.00	
