GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 1921
TO BE ANSWERED ON 05.12.2019

PROPER SAFETY APPARATUS IN NUCLEAR POWER PLANTS

1921. SHRI ANIL DESAI:

Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that the nuclear energy is the cheapest source of energy compared to other traditional sources of energy;

(b) if so, the number of nuclear power plants which are generating energy in the country and comparative power generated by each of them;

(c) whether any incident leading to risk to human life occurred during the last three years; and

(d) whether proper safety apparatus are there in each of the power plants, the details thereof?

ANSWER

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

(a) Tariffs of electricity generated by nuclear power are competitive with those of contemporary conventional base load generators like thermal power.

(b) The present installed nuclear power capacity comprises of 22 reactors with a total capacity of 6780 MW. The electricity generation from the nuclear power plants during the year 2018-19 was about 37813 million units. The details are given in *Annexure*.

(c) No, Sir.

(d) Yes, Sir. Highest priority is accorded to safety in all aspects of nuclear power viz. siting, design, construction, commissioning, and operation. Nuclear power plants are designed adopting safety principles of redundancy, diversity and provided fail-safe design features following a defence in depth approach. This ensures that there are multiple barriers between the source of radioactivity and the environment.

The operations are performed adopting well laid out procedures by highly qualified, trained and licensed personnel. Appropriate Personal Protection Equipments and monitoring aids are provided to all the personnel working in the nuclear power plants.

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Annexure

State	Location	Unit	Capacity (MW)	Commercial Generation (in Million Units, MU)[$] 2018-19
Maharashtra	Tarapur	TAPS-1	160	1322
		TAPS-2	160	937
		TAPS-3	540	4354
		TAPS-4	540	4154
Rajasthan	Rawatbhata	RAPS-1	100	[@]
		RAPS-2	200	959
		RAPS-3	220	1550
		RAPS-4	220	1820
		RAPS-5	220	1720
		RAPS-6	220	1986
Uttar Pradesh	Narora	NAPS-1	220	1498
		NAPS-2	220	1664
Gujarat	Kakrapar	KAPS-1	220	[#]
		KAPS-2	220	1000
Karnataka	Kaiga	KGS-1	220	1600
		KGS-2	220	1939
		KGS-3	220	1662
		KGS-4	220	2016
Tamil Nadu	Kalpakkam	MAPS-1	220	[&]
		MAPS-2	220	1491
	Kudankulam	KKNPP-1	1000	2797
		KKNPP-2	1000	3345
Total Generation (MUs)				37813

[$] *The generation figures are rounded to nearest integer.*

[@] *RAPS-1 is under extended shutdown for techno- economic assessment*

[#] *KAPS-1&2 have been taken in project mode for Enmasse Coolant Channel Replacement (EMCCR) and Enmasse Feeder Replacement (EMFR) activities from August 01, 2016. KAPS-2 was synchronized to grid on September 22, 2018 and KAPS-1 on May 24, 2019 upon completion of these activities.*

[&] *MAPS-1 was taken in project mode from April 01, 2018 for Endshield related works*