

GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO.487**  
TO BE ANSWERED ON 03.12.2015

**STEPS TO DEAL WITH NUCLEAR WASTE**

487. SHRI AHMED PATEL:

Will the PRIME MINISTER be pleased to state:

- (a) whether as per the latest records, nuclear energy is cheaper than pit based energy for the final consumer, if so, the details thereof, State-wise/UT-wise;
- (b) whether Government has been able to effectively deal with nuclear waste; and
- (c) what is the impact of disposing nuclear waste on the overall cost that the final consumer would have to pay?

**ANSWER**

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

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- (a) The tariffs of electricity through nuclear energy are comparable to those of the contemporary conventional base load power generating units (like coal based thermal power) located in the area/region. The tariffs of nuclear power projects presently in operation range from 94 Paise per unit for the first generation plants at Tarapur Atomic Power Station Units 1&2 (TAPS-1&2) to 388 Paise per unit for latest commissioned plant in Dec.2014 at Kudankulam Nuclear Power Project (KKNPP). The average tariff of nuclear power was about 278 Paise per unit in 2014-15. The range of tariffs of fossil fuel based sources of electricity in the central sector are given below:

Technology	Tariff Range (Paise/kWh) as on 31.03.2015
Coal (Pithead Generating Stations)	163 – 347
Coal (Non Pithead Generating Stations)	360 – 529
Natural Gas (APM)	431 – 579
Natural Gas (NAPM)	590 – 657
Liquified Natural Gas (LNG)	1040 – 1273
Naphtha/ HSD	790– 1500

- (b) Yes, Sir. The wastes generated at the nuclear power stations during the operation are of low & intermediate activity level and are managed at the site itself. These wastes are treated, concentrated, compacted, immobilised in solid materials like cement, bitumen, polymers etc. in high integrity steel containers and stored in specially constructed structures such as reinforced concrete trenches and tile holes, located at the site. Such facilities are located at all the nuclear power stations. The area around the facility including ground water is monitored for radioactivity. The radioactivity level of the stored wastes reduces with time and by the end of the plant life, falls to normal levels.
- (c) The cost of waste management, including waste storage at the nuclear power plant sites, is small and is internalised in the Operation & Maintenance (O&M) cost.

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