

GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO- 963**  
ANSWERED ON 13/02/2025

**NUCLEAR POWER PROGRAMME**

963. SHRI AYODHYA RAMI REDDY ALLA

Will the PRIME MINISTER be pleased to state:-

- (a) whether Government is planning to address the techno-economic paradox of nuclear power, wherein the increasing costs of safety measures and waste management are eroding the economic viability of nuclear energy;
- (b) the manner in which Government would reconcile the tension between promoting nuclear power as a low-carbon energy source and addressing concerns about nuclear proliferation, waste management, and public health risks; and
- (c) the details of Government's strategy for developing a comprehensive and integrated energy policy that balances the role of nuclear power with other low-carbon energy sources, such as solar and wind power?

**ANSWER**

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

- (a) While ensuring safety of nuclear power plants at the state of the art, efforts are underway to reduce the cost by bringing about improvements in design and efficiency, reducing / optimizing gestation period of projects, adopting appropriate financing models and making efforts to access low cost finance.
- (b) Nuclear power in the country has an impeccable safety and non-proliferation record. The monitoring of various environmental matrices around nuclear power plants have shown that the radiation dose due to the plants is a negligible fraction of the natural background. Epidemiological studies on plant personnel and their families have shown that there are no adverse effects on health due to operation of nuclear power plants. A structured public awareness and outreach programme based on a multipronged approach is being implemented by NPCIL to spread awareness about nuclear power and related aspects, and address the apprehensions of the people in a credible manner. Environmental Survey Laboratories (ESLs) of Bhabha Atomic Research Centre (BARC) are established at all sites before setting up the nuclear power plants. Each nuclear facility has to establish base line

data by conducting pre-operational surveys at the siting stage itself. ESLs continuously monitor the external radiation levels in the environment, measure meteorological parameters and analyze the distribution and concentration of radionuclides in samples of different environmental matrices to assess the contribution, if any, from the nuclear power plant, including discharge / storage of radioactive wastes arising from operation of NPPs. ESLs carry out detailed surveillance of aquatic, atmospheric & terrestrial domains up to a distance of 30 km around the sites. The reports of the environmental surveillance by ESLs are reviewed by AERB and it is seen that there is no adverse impact on the people and the environment due to nuclear power plant operation. The dose to a member of public residing in the vicinity of the nuclear power plants remains a small fraction of the AERB specified limit of 1 mSv/year.

- (c) Nuclear power is a clean base load source of electricity available 24X7, while other clean technologies like solar and wind are intermittent. The Government is planning the clean energy transition to Net Zero by optimally deploying various electricity generating technologies to ensure reliable and quality energy supply.

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