

GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
**LOK SABHA**  
**UNSTARRED QUESTION NO. 609**  
ANSWERED ON 06.12.2023

**New Technologies for Clean Energy**

609. SHRI BRIJENDRA SINGH:

Will the PRIME MINISTER be pleased to state:

- (a) whether the Government is working on new technologies such as Small Nuclear Reactors to make clean energy transition;
- (b) if so, the details of the technologies along with the progress that has been made so far in this regard;
- (c) whether the Government has any plan to use blended financing and green bonds to attract private investment towards setting up Small Nuclear Reactors; and
- (d) if so, the steps taken/proposed to be taken by the Government to incentivise private investors in Nuclear Energy?

**ANSWER**

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

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- (a) Yes, Sir.
- (b) Nuclear power is considered as one of the most promising clean energy options for power generation. There is a thrust world over for a strategy to use nuclear power that could reduce reliance on fossil fuels over the coming years. Small capacity atomic power plants, popularly called Small Modular Reactors (SMRs), with their unique features of modularity, scalability, small footprint and improved safety present themselves as an attractive option for repurposing of retiring coal-based thermal power station sites. Deploying Small Modular Reactors (SMRs) across the country especially in locations not suitable for large nuclear plants, can produce large amount of low-carbon electricity. In order to move away from fossil fuel consumption, SMRs can be installed and operated for repurposing the aging fossil fuel based power plants.

However, SMRs are not expected to serve as replacement to conventional large-sized nuclear power plants, which serve as base load plants.

Nuclear power plants are installed and operated in line with stringent regulatory requirements to contain radiation and to avoid exposure to public in all circumstances. The techno-commercial aspects of SMRs are still in initial stages even globally and its large scale deployment depends on various factors including regulatory harmonization globally by International Atomic Energy Agency (IAEA), especially considering emergency planning zone and public acceptance.

Small Modular Reactors (SMR) is a promising technology in industrial decarbonization especially where there is a requirement of reliable and continuous supply of power. India is considering steps for development of SMR, to fulfil its commitment to Clean Energy transition.

(c) & (d) No decision has been taken as yet.

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