

**GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
LOK SABHA  
UNSTARRED QUESTION NO : 4171  
TO BE ANSWERED ON 21/04/2010**

**IMPORT OF URANIUM**

**4171 SHRI ARJUN MUNDA:**

**WILL THE PRIME MINISTER BE PLEASED TO STATE:**

- (a) whether the uranium used in the nuclear reactors for production of nuclear energy has reached India after the signing of Indo-US civil nuclear deal;
- (b) if so, the details thereof;
- (c) the extent to which the present power crisis can be solved with the import of uranium from various countries; and
- (d) the States which are likely to be benefited therefrom?

**ANSWER**

**THE MINISTER OF STATE FOR SCIENCE & TECHNOLOGY AND EARTH SCIENCES (INDEPENDENT CHARGE), PMO, PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PARLIAMENTARY AFFAIRS.  
(SHRI PRITHVIRAJ CHAVAN):**

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- (a)&(b) Yes, Sir. Following the decision of Nuclear Supplier's Group in September, 2008 and finalization of Agreements with friendly countries including the USA, contracts have been signed with France, Russia and Kazakhstan for supply of uranium. While France has completed the supply, part supplies have been received from Russia.
- (c) Imported fuel can be used only in reactors under International Atomic Energy Agency (IAEA) safeguards. At present only 7 operating reactors are under IAEA safeguards. Capacity utilization has improved after introduction of imported uranium in safeguarded reactors.
- (d) The State of Maharashtra, Gujarat, Rajasthan, Delhi, Uttar Pradesh, Haryana, Punjab, Himachal Pradesh, Uttarakhand, Jammu & Kashmir and Chandigarh are likely to be benefited from the above import of Uranium.

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**GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
LOK SABHA  
UNSTARRED QUESTION NO : 4184  
TO BE ANSWERED ON 21/04/2010**

**ATOMIC POWER GENERATION POTENTIAL IN GUJARAT**

**4184 SHRI KACHHADIA NARANBHAI:**

**WILL THE PRIME MINISTER BE PLEASED TO STATE:**

- (a) the atomic power generation potential exploited in Saurashtra Kutch Region (SKR) of Gujarat; and
- (b) the total atomic power generated in Gujarat out of the power generated from other source at present in the State?

**ANSWER**

**THE MINISTER OF STATE FOR SCIENCE & TECHNOLOGY AND EARTH SCIENCES (INDEPENDENT CHARGE), PMO, PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PARLIAMENTARY AFFAIRS.  
(SHRI PRITHVIRAJ CHAVAN):**

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- (a) The Site Selection Committee of the Government had requested Gujarat government to offer suitable sites for locating nuclear power plants. The Gujarat government offered six sites, including three in the Saurashtra region. The sites were evaluated in detail and a site at Chhaya Mithi Viridi in Bhavnagar district of the Saurashtra region was found to be suitable. The Government has accorded 'in principle' approval for the site in October 2009, for locating six reactors, each of 1000 MWe or higher capacity. Pre-project activities are currently on hand with a plan to commence work on the first set of twin units at the site in the year 2012.
- (b) The installed capacity in Gujarat (as on 31.03.2010) including allocation from central sector generating stations in the Western electricity region is 13908 MW. The share of nuclear power in Gujarat from TAPS 1 to 4 and KAPS 1&2 is 559 MW, constituting about 4%.

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**GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
LOK SABHA  
UNSTARRED QUESTION NO : 4209  
TO BE ANSWERED ON 21/04/2010**

**NUCLEAR POWER PLANTS**

**4209 SHRIMATI HARSIMRAT KAUR BADAL:  
SHRIMATI YASHODHARA RAJE SCINDIA:  
SHRI MOHINDER SINGH KAYPEE:  
SHRI BADRUDDIN AJMAL:  
SHRI KALIKESH N. SINGH DEO:  
SHRI RAVNEET SINGH:**

**WILL THE PRIME MINISTER BE PLEASED TO STATE:**

- (a) whether the Government has received several proposals from the State Governments during the last six months for setting up of new nuclear power plants in their States;
- (b) if so, the details thereof; State-wise;
- (c) the decision taken by the Union Government on these proposals;
- (d) the locations identified in these States alongwith cost of the projects; and
- (e) the time by which these plants will become operational alongwith their capacity?

**ANSWER**

**THE MINISTER OF STATE FOR SCIENCE & TECHNOLOGY AND EARTH SCIENCES (INDEPENDENT CHARGE), PMO, PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PARLIAMENTARY AFFAIRS.  
(SHRI PRITHVIRAJ CHAVAN):**

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- (a) & (b) Consequent to the in principle approval of sites in Andhra Pradesh, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Tamilnadu and West Bengal in October 2009. Governments of Rajasthan, Karnataka and Bihar have reiterated their requests for setting up new nuclear power plants in future. The sites under consideration are Mahi-Banswara (Rajasthan), Kaiga & Mannur (Karnataka) and Rajauli (Bihar).
- (c) to (e) The evaluation of sites by the Standing Site Selection Committee (SSSC) of the Government is an on going activity. The 'in principle' approval of the sites by the Government is the first step in the process of setting up nuclear power plants. The details of the projects are finalized subsequently.

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**GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
LOK SABHA  
UNSTARRED QUESTION NO : 4213  
TO BE ANSWERED ON 21/04/2010**

**TARAPORE ATOMIC POWER PLANT**

**4213 SHRI GANESH SINGH:**

**WILL THE PRIME MINISTER BE PLEASED TO STATE:**

- (a) whether Tarapore Atomic Power Plant is operating well below capacity due to shortage of uranium and consequently Madhya Pradesh is getting only half power supply in comparison to its allotted quota;
- (b) if so, the details thereof alongwith the reasons therefor;
- (c) whether the Government proposes to increase supply of uranium to this plant; and
- (d) if so, the details thereof?

**ANSWER**

**THE MINISTER OF STATE FOR SCIENCE & TECHNOLOGY AND EARTH SCIENCES (INDEPENDENT CHARGE), PMO, PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PARLIAMENTARY AFFAIRS.  
(SHRI PRITHVIRAJ CHAVAN):**

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- (a) & (b) Tarapur Atomic Power Station located in Maharashtra has four reactors units 1 to 4 in operation. Units 1&2 (2x160 MW) use imported enriched uranium and are operating at full power. The power from these units is allocated to the states of Maharashtra & Gujarat. Units 3&4 (2x540 MW) use domestic natural uranium. Madhya Pradesh has a share of 20% from TAPS 3&4. These reactors are currently operating at about 70% of their rated power capacity due to non availability of domestic uranium in the required quantity. Consequently, Madhya Pradesh and other beneficiary states are getting a proportionately lower power supply.
- (c) Yes, Sir.
- (d) The government is making efforts to augment domestic uranium supply for nuclear power plants including TAPS 3&4 fuelled by domestic uranium by expanding existing mines and opening of new mines and processing mills.

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**GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
LOK SABHA  
UNSTARRED QUESTION NO : 4241  
TO BE ANSWERED ON 21/04/2010**

**LIFE OF NUCLEAR POWER STATIONS**

**4241 SHRI RAM SUNDAR DAS:  
SHRI BHISMA SHANKER ALIAS KUSHAL TIWARI:**

**WILL THE PRIME MINISTER BE PLEASED TO STATE:**

- (a) the names of nuclear power stations whose life span is going to expire;
- (b) the steps taken to prevent the threats of radioactivity caused by these power stations;
- (c) the names of nuclear power stations where incidents of radioactivity leakage have occurred during the last three years and till date;
- (d) whether the Government has conducted or proposes to conduct any study to assess the impact of radioactivity on the families residing near these stations?
- (e) If so, the details of the study thereof; and
- (f) the action taken or proposed to be taken by the Government in this regard?

**ANSWER**

**THE MINISTER OF STATE FOR SCIENCE & TECHNOLOGY AND EARTH SCIENCES (INDEPENDENT CHARGE), PMO, PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PARLIAMENTARY AFFAIRS.  
(SHRI PRITHVIRAJ CHAVAN):**

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- (a) Nil. Internationally, the economic life of nuclear power stations is 30-40 years. Based on systematic life assessment studies and life extension measures, the nuclear power plants can be safely operated for another 20-25 years. In India also our experience has been similar. Operation of all plants is subject to licensing by the Atomic Energy Regulatory Board (AERB) and review of operation from time to time.
- (b) Not applicable.
- (c) During the last three years, there has been no Incident of leakage or discharge of radioactivity beyond the limits specified by the AERB.

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- (d) Epidemiological surveys to assess the effects of radiation among the employees and their family members who reside near the nuclear power plants have been completed by the Tata Memorial Centre, a premier research institute in India.
- (e) The above surveys have indicated that the operations of nuclear power plants have no ill effects on health.
- (f) Not applicable in view of (e) above.

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**GOVERNMENT OF INDIA  
DEPARTMENT OF ATOMIC ENERGY  
LOK SABHA  
UNSTARRED QUESTION NO : 4280  
TO BE ANSWERED ON 21/04/2010**

**UNDERGROUND NEUTRINO OBSERVATORY LABORATORY**

**4280 SHRI R. THAMARAISELVAN:**

**WILL THE PRIME MINISTER BE PLEASED TO STATE:**

- (a) whether the Government is considering to set up an underground Neutrino Observatory Project in Tamil Nadu;
- (b) if so, the details thereof;;
- (c) whether the Government has taken any steps to allay the radiation bears among local people and environmentalists; and
- (d) if so, the details thereof?

**ANSWER**

**THE MINISTER OF STATE FOR SCIENCE & TECHNOLOGY AND EARTH SCIENCES (INDEPENDENT CHARGE), PMO, PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PARLIAMENTARY AFFAIRS.  
(SHRI PRITHVIRAJ CHAVAN):**

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- (a) Yes, Sir. The India based Neutrino Observatory (INO) is proposed to be set up through the Department of Atomic Energy and Department of Science & Technology. Presently a site in Bodi West Hills near T.Pudukottai village of Theni District, Tamilnadu has been identified as a suitable location.
- (b) The project includes construction of a world class underground laboratory under a rock cover of at least 1200 m from all directions. This underground laboratory will be accessed by 7.5 meter wide tunnel of approximately 2 km in length. The primary goal of INO is to study neutrino properties. Determination of neutrino properties is one of the most significant open



problems in Physics today. Such studies will help us in understanding the interactions among subatomic particles at a very small scale. In this underground laboratory a massive 50 kton particle detector will be installed to study the cosmic ray produced neutrinos. The project will put India back on the world-map of underground science, a position that was held by India during the 2nd half of the 20th century.

(c)& (d) There is no radiation involved in this experiment. Neutrinos have been around us from the beginning of the universe. In fact the experiment is required to be carried out underground only to avoid the cosmic ray particles. This is a very passive detector where the neutrinos already existing in nature will be detected. Scientists involved in this project are clarifying this to the local population by organizing interaction meetings with the local people as well as through public outreach programmes. A meeting was also organized by the District Collector of Theni District, Tamilnadu in his office on 25<sup>th</sup> January 2010, where the INO scientists explained the salient features of this project to the local MLA, Panchayat Presidents, representatives of farmers etc.

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