(c) The project proponent/operator has to obtain statutory clearances *viz.*, environmental clearance, Coastal Regulation Zone clearance (in respect of coastal sites) from Ministry of Environment and Forests (MoEF), consent to establish from State Pollution Control Board before commencing construction of nuclear power plants. Consent has also to be obtained from Atomic Energy Regulatory Board (AERB) before construction. AERB gives consent at various stages of the NPP namely siting, construction, commissioning and operation.

(d) The average time taken for the construction of nuclear power plants in case of the last three projects completed has been about five and half years.

Civil use of Atomic Energy

2486. SHRI TARUN VIJAY: Will the PRIME MINISTER be pleased to state:

(a) the areas where civil use of Atomic Energy is being done;

(b) the details of the projects of this nature and cost of each such project; and

(c) the status of India-Japan Cooperation in civil nuclear energy region?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI V. NARAYANASAMY): (a) In addition to generation of electrical power (present Installed capacity being 4780 Mwe) through nuclear fission, the radiation and radioisotope technologies have been successfully and extensively deployed as non-power applications for societal benefit in Agriculture, Healthcare and Industry. These applications have made considerable impact in terms of (a) availability of improved varieties of crop plants (especially, oil seeds and pulses), (b) improving microbiological safety of food and enhancement of shelf-life of certain vegetables and fruit, their export and (c) diagnosis of and treatment of several health conditions, particularly, cancer and (d) industrial radiography. In addition, the radiation and isotope technologies are also used for material modification, quality control of manufactured components, industrial trouble shooting and process optimization, augmenting water resources in arid and dry regions etc.

(b) The major non-power applications of isotope and radiation technology are carried out through Board of Radiation and Isotope Technology (BRIT) in the areas of Health Care, Industrial Applications and also Research and Development. The Eleventh Plan projects being implemented by BRIT (alongwith their costs) are as follows:

Sl. No.	Name of the Project	Sanctioned Cost (` in crores)
1	2	3
1.	Integrated Facility for Radiation Technology (IFRT), Tenth Plan	18.05

1	2	3
2.	Revamping and Augmentation of Infrastructural	15.92
3.	DAE Medical Cyclotron Processing Facility for Radio-Isotopes and Radiopharmaceuticals	25.15
4.	Integrated Irradiator Development	3.00
5.	Production facility for 99Mo-99mTC Column Generators of high specific activity Mo-99	7.50
6.	Construction of state of the art immunoassay Facility	2.05
7.	Construction of state of the art GLP and GMP Compliant labelled compounds laboratory (CCLC)	3.40
8.	Indigenous HDR Brachytherapy Equipment (IHDR)	9.60
9.	Medical Grade Fission Moly production capacity	128.00

Some of the Eleventh plan projects of BARC (along with their costs) in the field of Agriculture, Food preservation and Healthcare and Radiation Biology, industries for civil use of nuclear energy are listed below as examples:

1. Isotope processing at BARC (Rs. 0.6 Cr.)
2. Isotopes and radiation technologies (Rs. 65.25 Cr.)
3. Research on Agricultural Products (Rs. 75.0 Cr.)
4. R&D in Radiation Technology for Food Preservation and Hygienization (Rs. 8.25 Cr.)
5. Radiation Medicine, Radiation Effects and Healthcare (Rs. 5.60 Cr.)
6. Nuclear Diagnostics (VECC, Kolkata) (Rs. 2.0 Cr.)
7. Setting up 30 meV Medical Cyclotron (VECC, Kolkata) (Rs. 57.54 Cr.)
8. Augmentation of Healthcare Services (Rs. 74.0 Cr.)
9. Nuclear Diagnostics and medical use of PET (VECC, Kolkata) (Rs. 15.0 Cr.)
10. Development of cancer care facility at Shillong (Rs. 50.0 Cr.)
11. Advance Research in Molecular Biology and study of radiation effects on human health (Rs. 10.0 Cr.)
12. Radiation Effects in Biological systems (Rs. 37.80 Cr.)
13. Technology and Infrastructure Development (Cancer) (Rs. 19.50 Cr.)
14. Cancer and Public health research (Rs. 36.50 Cr.)

(c) Three rounds of negotiations have been held so far. Discussions are continuing' on a draft Nuclear Cooperation with Japan.

Power cuts at Terminal-3 of IGI

†2487. SHRI SATYAVRAT CHATURVEDI:
SHRI MOTILAL VORA:

Will the Minister of CIVIL AVIATION be pleased to state:

(a) whether it is a fact that complaints of power cuts at Terminal-3 of I.G.I. are being received ever since it was constructed;

(b) whether it is also a fact that there was a power cut for more than four hours in the morning on 7 August, 2011 due to which the air traffic took about 11 hours to normalise;

(c) if so, the number of air services that were affected and the estimated loss incurred as a result of this;

(d) the number of times power-cuts have occurred at T-3 before this incident; and

(e) the steps taken to stop its recurrence in future?

THE MINISTER OF CIVIL AVIATION (SHRI VAYALAR RAVI): (a) to (e) On operationalisation of Terminal-3 of IGI Airport from 28.7.2010 there were momentary interruptions of power in Terminal-3 due to power failures in the grid connected to BSES Mahipalpur 66 KV Substation. Since September, 2010 the Terminal Substation is equipped with 100% power backup, to ensure uninterrupted power supply to the Terminal. However, on 7th August, 2011, there was a power outage at T3 for 04 hours. During this period, the systems were down but partial lighting was available. However, air services were not affected. In order to deal with such exigencies, Standard Operating Procedure has been implemented, Operational Management rules have been reviewed and followed up, and rigorous training has been imparted to all concerned.

Pilots quilting Air India

2488. SHRI TARIQ ANWAR: Will the Minister of CIVIL AVIATION be pleased to state:

(a) whether it is a fact that the 48 pilots of Air India has joined other airlines in the last three months;

(b) if so, the details thereof;

(c) the reasons therefor; and

†Original notice of the question was received in Hindi.