(b) if so, whether it is also true that APGENCO and NPCIL are going to sign the agreement very soon; and

(c) if so, the details of (a) and (b) above?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITHVIRAJ CHAVAN): (a) No, Sir.

(b) and (c) Not applicable in view of (a) above. However, APGENCO and NPCIL are currently engaged in preliminary discussions on setting up a nuclear power plant in Andhra Pradesh in future.

Nuclear Power Plants

577. SHRI RAMDAS AGARWAL: Will the PRIME MINISTER be pleased to state:

(a) the number of nuclear power plants required to be set up in India during the current five year plan period;

(b) the investment expected to be made in next 10 years;

(c) in which part of the country nuclear plants would be set up indicating what would be expected production capacity, Plant-wise, location-wise and State-wise; and

(d) by when such nuclear plants would start producing power and whether these plants would be working with full capacity?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITHVIRAJ CHAVAN): (a) The XI Plan proposals envisage start of work on 8 Pressurized Heavy Water Reactors (PHWRs) of 700 MWe, 10 Light Water Reactors (LWRs) each of 1000 MWe or larger capacity based on international cooperation and an Advanced Heavy Water Reactor (AHWR) of 300 MWe. In addition, pre-project activities on two Fast Breeder Reactors (FBRs) of 500 MWe are also planned.

(b) The exact investment to be made will depend on individual project cost. The overnight cost of indigenous PHWRs is about Rs. 6 crore / MWe at 2008 prices. Thus, the investment in respect of indigenous nuclear power reactors is expected to be about Rs. 50,000 crore at 2008 prices. The cost of LWRs will depend on the business model, extent of indigenization and commercial terms which will be known only after commercial agreements are negotiated.

(c) The Government has approved, in-principle, following sites for setting up future nuclear power reactors:

i. Kakrapar in Gujarat - 2 x 700 MWe PHWRs.

ii. Rawatbhata in Rajasthan - 2 x 700 MWe PHWRs.

iii. Kudankulam in Tamil Nadu - 2 x 1000 MWe LWRs.

iv. Jaitapur in Maharashtra - 2 x 1000 MWe LWRs.

In addition, the Site Selection Committee of the Department of Atomic Energy has evaluated sites for setting up future nuclear power plants from among the sites offered by State Governments and

submitted its report to the Government. The exact capacity in respect of LWRs would depend on the specifications of the reactors set up.

(d) The gestation period of these reactors is expected to be about 6 years from the first pour of concrete to commercial operation. The reactors will thus start generation after 6 years, depending on their start date.

Atomic Power Stations in Rajasthan

578. DR. GYAN PRAKASH PILANIA:
SHRI LALIT KISHORE CHATURVEDI:

Will the PRIME MINISTER be pleased to state:

(a) the total number of atomic power stations in Rajasthan and their total power generation capacity;

(b) the actual quantum of power generation thereof;

(c) the reasons of difference, if any, in their capacity and actual generation of power; and

(d) steps taken by Government to ensure their full power generation capacity?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITHVIRAJ CHAVAN): (a) Presently, there are four nuclear power reactors in operation in Rajasthan with a total capacity of 740 MWe The details are given below:-

Unit	Installed Capacity (MWe)	Present Power level (MWE)
RAPS-1	100	Shutdown
RAPS-2	200	Shut down
RAPS-3	220	152*
RAPS-4	220	148*
TOTAL :	740	300

*Being operated at lower power level to match fuel availability.

In addition, two more reactors RAPP-5&6 (2 x 220 MWe) are at an advanced stage of construction, expected to start commercial operations in 2009-10.

(b) and (c) The capacity in operation at present is 440 MWe as RAPS-1&2 are under shutdown. While RAPS-1 is shut down for techno-economic evaluation on its refurbishment/ continuation of operation, RAPS-2 is shut down for En-Masse Feeder Replacement (EMFR). The EMFR work on RAPS-2 has been completed and the reactor is expected to restart in 2009.

(d) Government of India has taken several steps to augment the indigenous fuel supply by opening new mines and mills. In addition, fuel supply has also been tied up through international co-operation after the successful conclusion of fuel supply agreements with France & Russian Federation. RAPS-2 is expected to operate at full power after its restart. The power level of RAPS -3&4 is also expected to increase with increased fuel availability progressively.