

**GOVERNMENT OF INDIA  
ATOMIC ENERGY  
LOK SABHA**

UNSTARRED QUESTION NO:1043  
ANSWERED ON:03.03.2010  
CONVERSION OF SEA WATER  
Alagiri Shri S. ;Sinh Dr. Sanjay

**Will the Minister of ATOMIC ENERGY be pleased to state:**

- (a) whether the sea water could be converted into potable water by means of atomic energy;
- (b) if so, whether Government has set up/proposes to set up any such project;
- (c) if so, the details thereof;
- (d) the per litre cost of conversion of sea water into potable water by atomic energy;and
- (e) the steps taken/propose to be taken by the Government for large scale conversion of sea water into potable water?

**Answer**

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

(a) & (b) Yes, Sir.

(c) Bhabha Atomic Research Centre (BARC) has developed desalination plants based on both Reverse Osmosis (RO) as well as thermal processes. RO plants that have been developed have capacities ranging from five thousand litres per, day to eighteen lakh litres per day. An 18 (eighteen) lakh litres per day capacity , desalination plant operating on the RO process has been set up at Kalpakkam,Tamil Nadu. Mufti Stage Flash (MSF) evaporation based thermal process plant: with capacity of forty five lakh litre per day has been set up at Kalpakkam.

BARC has also set up desalination plants at Sheelgaon village in Barmer District Rajasthan (30,000 litres/ day capacity) and Satlana village in Jodhpur District, Rajasthan (30,000 litres/day capacity) in cooperation with Defence Laboratory, Jodhpur for providing drinking water from borewell/brackish water sources. Three; desalination plants (5000 litres/day capacity each) have been set up in the Tsunami affected areas of Tamil Nadu for providing drinking water.

(d) The cost of conversion`of seawater into potable water using the above technologies varies between 5 to 10 paise/litre depending on local conditions, quality of end product and the technology in use.

(e) Department of Atomic Energy (DAE) has developed and demonstrated technologies which are made available to Government agencies for large scale conversion of sea water into potable water.