

**GOVERNMENT OF INDIA  
EARTH SCIENCES  
LOK SABHA**

UNSTARRED QUESTION NO:4284

ANSWERED ON:20.02.2014

PRODUCTION OF DRINKING WATER FROM SEA WATER

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**Will the Minister of EARTH SCIENCES be pleased to state:**

- (a) whether the Government has formulated any scheme to install a large number of plants in the coastal areas of the country for producing drinking water from sea water;
- (b) if so, the details thereof and the per litre cost of drinking water so produced from these plants; and
- (c) the time by which the said scheme is likely to be implemented?

**Answer**

MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTRY OF EARTH SCIENCES (SHRI S. JAIPAL REDDY)

(a) Yes Madam.

(b) The National Institute of Ocean Technology (NIOT) an autonomous body of the Ministry of Earth Sciences has indigenously designed, developed and demonstrated desalination technology for conversion of sea water into potable water based on Low Temperature Thermal Desalination (LTTD) technology. The LTTD is a process under which the warm surface sea water is flash evaporated at low pressure and the vapour is condensed with cold deep sea water.

This technology is efficient and suitable for island territories of India. Till date, 3 LTTD plants have been successfully commissioned in the country, one each at Kavaratti, Minicoy, Agatti, Lakshadweep .

The capacity of each of these LTTD plants is 1 lakh liter per day of potable water. ESSO – NIOT initiated a Prototype LTTD plant with a capacity of generating 2 million litres of potable water per day (2 MLD) at Tuticorin Thermal Power station, Tamil Nadu.

The cost per liter of desalination would depend on the technology used and cost of electricity which varies from place to place. According to the cost estimates made recently by an independent agency for LTTD technology, the operational costs per litre of desalinated potable water is about 61 paise for island based plants.

(c) The LTTD plant at Tuticorin, Tamil Nadu are proposed to be implemented during the XII plan period.