

GOVERNMENT OF INDIA  
MINISTRY OF NEW AND RENEWABLE ENERGY  
**LOK SABHA**  
**UNSTARRED QUESTION NO. 812**  
TO BE ANSWERED ON 07.02.2019

**ENERGY FROM WASTE**

812. SHRI VISHNU DAYAL RAM

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

- (a) whether any study has been undertaken to assess the feasibility of generating large scale energy from waste in India, if so, the details thereof;
- (b) whether such plants already exist in the country and the quantum of waste needed to generate electricity at these plants, if so, the details thereof;
- (c) whether generation of electricity at such plants is efficient as compared to global standards, if so, the details thereof;
- (d) whether challenges are being faced at these plants with regards to generation/efficiency etc., if so, the details thereof; and
- (e) the details of any plans to set up more such plants in the country to increase the percentage of energy generated from waste in the country ?

**ANSWER**

THE MINISTER OF STATE FOR NEW & RENEWABLE ENERGY AND POWER (I/C)  
(SHRI R. K. SINGH)

- (a) A study was undertaken by GEF-UNIDO to assess the potential of energy recovery from Industrial and Urban Organic Waste in the country. As per study, the estimated potential of energy generation in 2017 is 5690 MW.
- (b) 92 Plants with aggregate capacity of around 250 MW have been set up in the country for electricity generation from urban, agricultural and Industrial waste. Requirement of waste for electricity generation depends on the type and quality of waste and technology adopted. On an average, 100tons/day of Municipal solid waste (MSW) is required to generate one MW power.
- (c) Efficiency of electricity generation from Waste depends upon quality of waste available and technology adopted. Compositional characteristics of waste in India are very distinct compared to those in developed countries. Waste generated in the country has more organic components, more moisture content and low calorific value compared to waste generated in developed countries, which has direct influence on efficiency of electricity generation.
- (d) Major challenges being faced by waste to energy plants with regard to generation/efficiency are:
  - i). Poor quality of municipal solid waste,
  - ii). Lack of an efficient mechanism to segregate waste into biodegradable/dry/wet/ carbonaceous materials/ components etc.
  - iii). Seasonal variations in waste composition and properties
  - iv). High capital and O&M costs of waste-to-energy systems,
  - v). Lack of indigenous technology,
- (e) The Ministry of New and Renewable Energy has been promoting a programme for recovery of energy from Urban, Industrial and Agricultural Waste / Residues and Municipal Solid Waste. Under this programme, Central Financial assistance (CFA) is given for setting up of waste to energy projects.

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