

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 303
ANSWERED ON 05/12/2023

NATIONAL HYDROGEN MISSION

303. SMT. MAUSAM NOOR

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

- (a) whether Government has estimated the amount of demineralized water supply required for the implementation of the National Hydrogen Mission in the country;
- (b) if so, the measures taken by Government to address the additional water demand in water-stressed regions;
- (c) whether the National Hydrogen Mission is expected to reduce India's dependence on imported natural gas, as claimed by Government, and if so, the details of the manner in which this will be achieved; and
- (d) if the Hydrogen Mission will lead to saving one lakh crore rupees of fossil fuel imports by 2030, the specific strategies or initiatives that will contribute to this saving?

ANSWER

THE MINISTER OF NEW & RENEWABLE ENERGY AND POWER

(SHRI R.K. SINGH)

(a) & (b) For production of 1 kg of green hydrogen via electrolysis, around 10 litres of demineralized water is needed. Accordingly, the demineralized water requirement for 5 MMT Green Hydrogen production per annum will be about 50 Million Cubic Meter (MCM) per annum.

Majority of the Green Hydrogen production plants are expected to come up near port locations as per the industry feedback. In such cases, desalinized sea water could also be used for Green Hydrogen production.

Since water is a State subject, the project developers will have to comply with the State regulations for securing the water supply.

(c) & (d) The National Green Hydrogen Mission is expected to lead to development of 5 MMT Green Hydrogen production capacity per annum by 2030. Green Hydrogen has the potential to replace fossil fuels including natural gas, either as a source of energy or as a feedstock, thereby contributing to reduction in dependence on import of fossil fuels.

The Mission envisages substitution of Grey Hydrogen with Green Hydrogen in industries such as fertilizer production, petroleum refining, steel, shipping etc. reducing carbon footprint and dependence on imported fossil fuels.

The quantum of such reduction in imports is estimated at ₹ 1 lakh crore by 2030.

The specific strategies or initiatives under the Mission in this regard, inter – alia are as follows:

- i. Facilitating demand creation through domestic utilization;
- ii. Strategic Interventions for Green Hydrogen Transition (SIGHT) programme, which includes incentives for manufacturing of electrolyzers and production of green hydrogen;
- iii. Pilot Projects for green steel, mobility, shipping, decentralized energy applications, hydrogen production from biomass, hydrogen storage, etc.;
- iv. Development of Green Hydrogen Hubs;
- v. Research & Development programme, etc.
