

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 2511
ANSWERED ON 03.08.2023

RESOURCES FOR PRODUCTION OF GREEN HYDROGEN

2511. SHRI MANISH TEWARI

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

- (a) whether the Government has considered the burden on resources such as land and water required for green hydrogen production and if so, the details thereof;
- (b) whether the Government has determined the number of electrolyzers required to produce its envisaged target of 5 MMT per annum of green hydrogen production and if so, the details thereof;
- (c) whether the Government proposes a plan for utilizing its initial outlay of Rs. 19,744 crores for green hydrogen production and if so, the details thereof;
- (d) whether the country's current hydrogen needs relate to generation of grey hydrogen primarily used to make fertilizers and petroleum products and if so, the details thereof; and
- (e) whether the Government proposes to create a market for its envisaged 5 MMT per annum of green hydrogen production and if so, the details thereof?

ANSWER

THE MINISTER OF NEW & RENEWABLE ENERGY AND POWER

(SHRI R.K. SINGH)

(a) Green Hydrogen projects are expected to be implemented largely through private investments at suitable locations based on availability of land and water resources.

(b) The Mission is expected to lead to development of 5 MMT Green Hydrogen production capacity per annum by 2030, which would require installation of 60 - 100 GW of electrolyser capacity in India.

(c) The National Green Hydrogen Mission has an initial outlay of ₹ 19,744 crore, including ₹ 17,490 crore for the SIGHT programme, ₹ 1,466 crore for pilot projects and hydrogen hubs, ₹ 400 crore for R&D, and ₹ 388 crore towards other Mission components.

(d)&(e) About 5 MMT of Grey Hydrogen is presently estimated to be consumed annually in India, almost entirely in petroleum refining and manufacture of ammonia for fertilizers. In fertilizer production, hydrogen is a key input for production of ammonia (NH₃), which is used to produce urea and other fertilizers. In petroleum refining, hydrogen is mainly used for reducing sulphur content of fuels (desulphurization), and conversion of heavier feedstocks to more valuable products (hydrocracking).

The Mission strategy *inter-alia* includes interventions for demand creation by making Green Hydrogen produced in India competitive for exports and through domestic consumption.
