

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 4398
ANSWERED ON 20/08/2025

GREEN HYDROGEN PRODUCTION HUBS

4398. SHRI BASTIPATI NAGARAJU
SHRI B K PARTHASARATHI

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

- (a) the details of the quantity of green, blue and grey hydrogen produced in the country during the last three years, category, year and State-wise including Andhra Pradesh;
- (b) the details of the number of production hubs established in the country for each type of hydrogen—green, blue and grey;
- (c) whether the Government has set any target year for phasing out grey hydrogen and achieving complete transition to green hydrogen production and usage;
- (d) if so, the details thereof and the roadmap formulated to achieve the same;
- (e) whether the Government has taken any steps to incentivize industries and States to adopt green hydrogen technologies and shift from fossil fuel-based hydrogen production; and
- (f) if so, the details thereof and if not, the reasons therefor?

ANSWER

THE MINISTER OF STATE FOR NEW & RENEWABLE ENERGY AND POWER

(SHRI SHRIPAD YESSO NAIK)

(a) & (b) As per report titled '*Green Hydrogen: Enabling Measures Roadmap for Adoption in India*' by World Economic Forum, 6.5 Million Metric Tonnes (MMT) per annum of hydrogen is produced and utilised in the country. The Category wise and state wise data is not maintained at present.

As per the information available, the status of green hydrogen production capacity installed is placed at **Annexure**.

The following green hydrogen hubs have been identified under the National Green Hydrogen Mission so far:

- i. M/s NTPC group, through its subsidiary, NTPC Green Energy Limited, has identified a Green Hydrogen Hub project at Pudimadaka, Andhra Pradesh.
- ii. The Ministry of Ports, Shipping and Waterways has identified three major ports viz. Deendayal, Paradip and V.O. Chidambaranar (Tuticorin) Ports as hydrogen hubs.
- iii. Four (4 nos.) Hydrogen Valley Innovation Clusters (HVIC) have been identified namely Jodhpur HVIC, Pune HVIC, Bhubaneswar HVIC and Agency for New and Renewable Energy Research and Technology (ANERT) HVIC, Kerala.

Government of Andhra Pradesh has recently issued an order for establishing the State as India's largest green hydrogen hub and outlining a roadmap to transform Andhra Pradesh into a Green Hydrogen Valley by 2030.

(c) & (d) The Government of India is implementing the National Green Hydrogen Mission (NGHM), with an objective to make India a global hub of production, usage and export of green hydrogen and its derivatives. The NGHM has set a target to establish 5 MMT of green hydrogen production capacity for domestic use as well as export purpose.

Strategic Interventions for Green Hydrogen Transition (SIGHT) is a key component of the Mission which provides financial incentives for production of green hydrogen and electrolyser manufacturing. A production capacity of 8,62,000 tonnes per annum of green hydrogen has been allocated under this scheme to be used as feedstock or energy source for the replacement of fossil fuel – based hydrogen production.

(e)&(f) To adopt green hydrogen technologies and shift from fossil fuel-based hydrogen production, the following steps have been taken:

- i. Scheme Guidelines for Implementation of SIGHT Programme – Component – II: Incentive for Procurement of Green Ammonia Production (under Mode – 2A), under the Mission have been issued on 16th January 2024. Thirteen fertilizer companies have indicated an annual demand of 724,000 tonnes of green ammonia to replace ammonia currently produced from fossil fuel-based sources.
- ii. Scheme Guidelines for Implementation of SIGHT Programme – Component – II: Incentive for Procurement of Green Hydrogen Production (under Mode – 2B), under the Mission have been issued on 16th January 2024.

MNRE has advised states to incorporate provisions related to green hydrogen in their policies. MNRE had also organised a workshop on National Green Hydrogen Mission with states on 6th June 2024 at New Delhi.

Several states have taken proactive steps in this regard, details of which are as follows:

- i. Dedicated Green Hydrogen policies notified by the states of Andhra Pradesh, Maharashtra, Uttar Pradesh, and West Bengal
- ii. Facilitative provisions under the Renewable Energy or Energy or Industrial policies have been included by the states of Bihar, Himachal Pradesh, Madhya Pradesh, Odisha, Telangana, Rajasthan, Assam, and Chhattisgarh.

Current status of green hydrogen production capacity in India

- i. M/s ACME Cleantech Solutions Pvt. Ltd. has built a green ammonia integrated demonstration and pilot plant in Bikaner, Rajasthan with green ammonia production capacity of 5 metric tonnes per day and green hydrogen production capacity of 500 normal cubic meter per hour.
- ii. M/s Bharat Petroleum Corporation Limited (BPCL) has commissioned a green hydrogen plant with a capacity of 0.7 kilotonnes per annum at its Bina refinery.
- iii. National Institute of Solar Energy has commissioned a green hydrogen plant with a capacity of 10 normal cubic meters per hour in Gurugram, Haryana.
- iv. M/s INOX India Limited has commissioned a green hydrogen production plant of 190 tonnes per annum capacity at Chittorgarh, Rajasthan.
- v. M/s Hygenco Green Energies Pvt. Ltd. has commissioned a green hydrogen plant of 16 tonnes per annum capacity in Ujjain, Madhya Pradesh.
- vi. M/s Hygenco Green Energies Pvt. Ltd. has also commissioned a green hydrogen plant of 78 tonnes per annum capacity in Hisar, Haryana.
- vii. Additionally, M/s Hygenco Green Energies Pvt. Ltd. has also set up a green hydrogen plant of 230 tonnes per annum capacity in Chhatrapati Sambhajanagar, Maharashtra.
- viii. M/s SJVN Limited has inaugurated India's multi-purpose (Combined Heat and Power) Green Hydrogen Pilot Project at SJVN's 1,500 MW Nathpa Jhakri Hydro Power Station (NJHPS) in Jhakri, Himachal Pradesh. The state-of-the-art Green Hydrogen Pilot Project has capacity to produce 14 kilograms of Green Hydrogen daily during 8 hours of operation. In addition, it has the capacity to generate electricity through its fuel cell of 25 kW capacity.
- ix. M/s THDC India Limited has developed a green hydrogen plant with a production capacity of 50 kilograms per day in Rishikesh, Uttarakhand.
- x. M/s Larsen & Toubro Limited has set up a green hydrogen production plant of 15 tonnes per annum capacity in Hazira, Gujarat.
- xi. M/s Oil India Limited has commissioned a green hydrogen plant designed to generate 10 kilograms of green hydrogen in 8 hours and can produce upto 30 kilograms per day.
- xii. M/s Hero Future Energies has commissioned a green hydrogen production plant with a capacity of 25 tonnes per annum in Tirupati, Andhra Pradesh.
- xiii. M/s GAIL (India) Limited has commissioned a 10 MW green hydrogen plant at Vijaipur, Madhya Pradesh.
- xiv. M/s Adani New Industries Limited (ANIL) has commissioned a 5 MW green hydrogen pilot plant in Kutch, Gujarat.
- xv. M/s NTPC Limited has commissioned a green hydrogen plant at its Kawas township, Surat, Gujarat.
- xvi. M/s NTPC Limited has commissioned a green hydrogen plant at Leh, Ladakh.
- xvii. M/s Larsen & Toubro Limited has commissioned a green hydrogen plant at Kandla, Gujarat, with capability of producing approximately 140 metric tonnes of green hydrogen annually
- xviii. V. O. Chidambaranar Port Authority has successfully completed a pilot project for 10 normal metre cube per hour green hydrogen production.