

RAJYA SABHA
UNSTARRED QUESTION NO. 611
ANSWERED ON 07.02.2025

DEVELOPMENT OF HYDROGEN-POWERED TRAIN TECHNOLOGY

611 SHRI AJIT KUMAR BHUYAN:

Will the Minister of RAILWAYS be pleased to state:

- (a) whether Government has made any advancement in the development of Hydrogen-Powered train technology;
- (b) if so, the details thereof, if not, the reasons therefor;
- (c) whether Government has details of proposed ground infrastructure for Hydrogen-Powered trains, especially in terms of its design and environmental considerations;
- (d) if so, the details thereof, if not, the reasons therefor;
- (e) whether Government has identified any potential funding sources or partnerships to support the development and deployment of Hydrogen-Powered trains;
- (f) if so, the details thereof, if not, the reasons therefor; and
- (g) the steps taken in this regard during the last three years?

ANSWER

MINISTER OF RAILWAYS, INFORMATION & BROADCASTING
AND ELECTRONICS & INFORMATION TECHNOLOGY

(SHRI ASHWINI VAISHNAW)

(a) to (g): Indian Railways has taken up a state-of-the-art project of development of first Hydrogen Train on a pilot basis by retrofitment of Hydrogen Fuel cell on Diesel Electric Multiple Unit (DEMU) rake.

The specifications for this fully indigenously developed train have been prepared by the Research Design & Standards Organization (RDSO). This is slated to be among the longest hydrogen train in the world presently. It will also be a Hydrogen train among the maximum powered Hydrogen trains in the world.

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Along with the train, concomitant on-ground infrastructure to refill hydrogen is envisioned with an integrated hydrogen production-storage-dispensation facility. Necessary safety approvals for the facility layout from Petroleum and Explosives Safety Organization (PESO) are in place.

The project further establishes the commitment of Indian Railways towards advancements in alternative energy-powered train travel thereby ensuring a cleaner and greener future for the country's transportation sector.
