

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
RAJYA SABHA
UNSTARRED QUESTION NO. 2362
ANSWERED ON 07.08.2026

INTRODUCTION OF HYDROGEN POWERED TRAINS IN INDIAN RAILWAYS

2362 SHRI LAHAR SINGH SIROYA:

Will the Minister of RAILWAYS be pleased to state:

- (a) whether Government has made significant progress during 2026 towards introduction of hydrogen powered trains in the country;
- (b) the present status of the country's first hydrogen train project, including the development of hydrogen production and refuelling infrastructure;
- (c) whether the introduction of hydrogen powered trains is expected to reduce carbon emissions, improve energy security and promote indigenous green technologies; and
- (d) the roadmap for expanding hydrogen-powered train services across the Indian Railways network?

ANSWER

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

(SHRI ASHWINI VAISHNAW)

(a) to (d) The Hydrogen powered train was inaugurated on 17.07.2026. Till 03.08.2026, this train has covered 2492 km of commercial run in 89 km long Jind-Sonipat section. The hydrogen train has been developed by Indian Railways on pilot basis to demonstrate the use of hydrogen powered train technology in Railways.

A dedicated Hydrogen Plant has been setup at Jind for providing hydrogen in this Trainset. The hydrogen storage facility has been set up in accordance with the guidelines of the Petroleum and Explosives Safety Organization (PESO), ensuring adherence to prescribed safety standards and protocols.

The Hydrogen Trainset operation ensures zero CO₂ emissions with water vapour being the only emission. The Trainset works on fuel cell technology that does not have any moving part and conventional engine for traction power generation therefore the operation is much quieter thereby reducing noise pollution. This project establishes Indian Railways in hydrogen technology.

Prominent features and advantages of this technology include:

- Indigenously designed and developed in India demonstrating IR's commitment to Atmanirbhar Bharat.

- Presently, it is the world's longest (10 coaches) and most powerful (2400 kW) Hydrogen Trainset on Broad Gauge platform.
- The Trainset comprises of two Driving Power Cars (DPCs) of 1200 kW each, totalling 2400 kW along with eight passenger cars.
- It represents a major step in development of next generation fuel technology in Railways, inherently optimizing noise reduction and curtailing reliance on imported fossil fuels.

At present, IR has taken up the running of hydrogen-powered train technology on a pilot basis on the Jind-Sonipat circuit. Decision to run hydrogen trains on other routes depends on availability of resources, operational and other requirements.
