

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS

**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 285**  
**ANSWERED ON 03.02.2023**

**HYDROGEN FUEL BASED TRAIN**

**285#. DR. ANIL SUKHDEORAO BONDE:**

Will the Minister of RAILWAYS be pleased to state:

- (a) whether Railways is considering on running a pollution free hydrogen fuel based train;
- (b) if so, the details thereof and cost estimate of the same;
- (c) the date by when and place from where Railways is considering on starting this train project; and
- (d) whether the cost of running this train will be more than that of diesel/DMU/EMU train or the other way round?

**ANSWER**

MINISTER OF RAILWAYS, COMMUNICATIONS AND  
ELECTRONICS & INFORMATION TECHNOLOGY  
(SHRI ASHWINI VAISHNAW)

(a) to (d): A Statement is laid on the Table of the House.

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STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 285 BY DR. ANIL SUKHDEORAO BONDE ANSWERED IN RAJYA SABHA ON 03.02.2023 REGARDING HYDROGEN FUEL BASED TRAIN

(a) & (b): Yes, Sir. Indian Railways (IR) has envisaged to run 35 (thirty five) Hydrogen trains under “Hydrogen for Heritage” at an estimated cost of ₹ 80 crores per train and ground infrastructure of ₹ 70 crores per route on various heritage/hill routes.

Besides, IR has also awarded a pilot project for retrofitment of Hydrogen Fuel cell on existing Diesel Electric Multiple Unit (DEMU) rake along with ground infrastructure at the cost of ₹ 111.83 crores which is planned to be run on Jind –Sonipat section of Northern Railway.

(c): Field trials of the first prototype on Jind –Sonipat section of Northern Railway is expected to commence in 2023-2024.

(d): The running cost of Hydrogen fuel based train is not established in IR scenario. It is estimated that the initial running cost of Hydrogen fuel train-set will be higher which will subsequently reduce with increase in number of trains. Further, the use of Hydrogen as fuel provides larger benefits in the direction of green transportation technology to support zero carbon emission goals as a clean energy source.

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