

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS

**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 2500**  
**ANSWERED ON 21.03.2025**

**NET ZERO EMISSION TARGET OF INDIAN RAILWAYS**

2500# SHRI MAYANKBHAI JAYDEVBHAI NAYAK:

SHRI BABURAM NISHAD:

SHRI BRIJ LAL:

SMT. REKHA SHARMA:

Will the Minister of RAILWAYS be pleased to state:

- (a) the current status of Indian Railways' net zero emission target and the progress made so far;
- (b) the total percentage of railway tracks to be electrified by 2025 and expected deadline set for achieving 100 per cent electrification along with the estimated renewable energy capacity required to meet the traction power demand of 10,000 MW by 2030; and
- (c) whether Indian Railways is planning to invest in or co-develop solar parks under the Design, Build, Finance, Own and Operate (DBFOO) model?

**ANSWER**

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

(a) to (c) Indian Railways has envisioned to become net zero carbon emitter through offsetting carbon emissions with the usage of power through non-fossil sources, saving in diesel consumption by electrification of railway tracks, consistent efforts directed towards modal shifting of cargo and passenger from road to rail, harnessing hydrogen gas to drive train sets etc. Through these efforts, Indian Railways are on way to achieve net zero carbon emitter status for scope 1 emissions.

About 98% of the total BG network of the Indian Railways has been electrified.

Electrification carried out during 2014-24 and before 2014 is as under:

Period	Route Kilometer
Before 2014 (about 60 years)	21,801
2014-25 (upto Feb' 2025)	45,922

The completion of Electrification project(s) depends on various factors like forest clearances by officials of forest department, shifting of infringing utilities, statutory clearances from various authorities, geological and topographical conditions of area, law & order situation in the area of project(s) site, number of working months in a year for particular project site due to climatic conditions etc. All these factors affect the completion time of project(s).

To enhance the share of renewable energy, a combination of solar, wind and other renewable sources is planned based on strategic power procurement planning. Most of the renewable power projects for Indian Railways have been taken up under Power Purchase Agreement (developer mode).

The details of Renewable power capacities commissioned as of February' 2025 is as under:

Renewable power capacities commissioned	
Solar (Rooftop + Land)	553 MW
Wind	103 MW
RTC (Round The Clock) (Hybrid- Solar+wind)	100 MW
Total	756 MW

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