

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS**

**LOK SABHA
UNSTARRED QUESTION NO. 2143
TO BE ANSWERED ON 12.03.2025**

ENVIRONMENT SUSTAINABILITY OF RAILWAYS

**2143. SHRI SHASHANK MANI
SHRI G KUMAR NAIK:**

Will the Minister of RAILWAYS be pleased to state:

- (a) the measures taken by the Railways to promote environmental sustainability including steps towards reducing carbon emissions and achieving net-zero emissions;**
- (b) the progress made in electrification of railway routes, adoption of renewable energy sources and implementation of energy-efficient technologies across the railway network;**
- (c) whether the Government has set any targets or timelines for Indian Railways to achieve carbon neutrality and transition to a fully green and sustainable transport system;**
- (d) if so, the details thereof along with timeline fixed and measures proposed to achieve the same; and**
- (e) the specific schemes or projects undertaken to minimize the environmental impact of railway operations?**

ANSWER

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

(SHRI ASHWINI VAISHNAW)

(a) to (e) Indian Railways (IR) has taken up electrification of Broad Gauge (BG) Railway lines in mission mode. As part of this mission,

Electrification carried out during 2014-25 and before 2014 is as under:

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

At present, about 98% of the total BG network of the Indian Railways has been electrified. Till January 2025, about 494 Mega Watt (MW) of solar power plant (both rooftop and land) and around 103 Mega Watt (MW) of wind power plants have been commissioned over Indian Railways. In addition, 100 MW of renewable power under Round the Clock (RTC) mode has also started flowing.

Indian Railways has envisioned to become net zero carbon emitter by 2030 for scope 1 emissions.

In addition to above, Indian Railways has taken various initiatives to promote environment friendly practices. Some of them are as under:-

- **Conversion of End on Generation (EOG) trains into Head on Generation (HOG) trains to reduce noise, air pollution and diesel consumption.**
- **Shifting from diesel to electric traction.**
- **Construction of Eastern & Western Dedicated Freight Corridors (DFCs).**
- **Introduction of 3-phase propulsion system with regenerative braking.**

- **Provision of energy efficient Light Emitting Diode (LED) lighting in all Railway installations including stations, service buildings, residential quarters and coaches for reduction in electricity consumption.**
- **Use of star rated appliances.**
- **Green Certifications & Environment Management System Certifications of industrial units, railway stations and other railway establishments.**
- **Hydrogen fuelled train set pilot project.**
- **Afforestation.**
- **Proper waste management.**
