

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 1724**  
**ANSWERED ON 13.02.2026**

**COMPARTIVE ASSESSMENT OF FREIGHT MOVEMENT ON RAILWAY AND ROAD  
TRANSPORT**

1724 SHRI MUKUL BALKRISHNA WASNIK:

Will the Minister of RAILWAYS be pleased to state:

- (a) a comparative assessment of freight movement on railway and on road transport in the last five years, and the revenue generated in both sectors since 2019, year-wise;
- (b) whether it is a fact that freight movement on railways is more economically and environmentally sustainable as compared to its movement on road;
- (c) if so, the details on the reasons that lead to the preference of adopting road transport over rail-based movement of freight; and
- (d) the steps taken by Government to enhance freight movement on railway network?

**ANSWER**

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

(SHRI ASHWINI VAISHNAW)

(a) to (d) The details of freight carried by Indian Railways (IR) since 2020–21 are as under:

Financial Year	Freight Loading (in MT)	Freight Revenue (₹ in Crore)
2020–21	1233	1,17,232
2021–22	1418	1,41,096
2022–23	1512	1,62,263
2023–24	1591	1,68,293
2024–25	1617	1,71,163

During 2024–25, Indian Railways has transported 1617 MT of freight traffic, which is about 28% of total freight carried, thereby becoming the second largest freight carrying railway system in the world.

Transport by rail is more economical and environment friendly than road transport. As per NITI Aayog report titled “Fast Tracking Freight In India”, June 2021, the “Reduction in CO<sub>2</sub> emissions in transportation by railways as compared to transportation by road” is as under:

Mode of Transportation	CO <sub>2</sub> emission for transportation of 1 tonne for 1 km
Road	101 gm
Rail	11.5 gm (about 89% less)

### Steps taken to enhance freight movement on Railway Network

Indian Railways has undertaken a comprehensive set of initiatives aimed at increasing its modal share in freight transportation. These initiatives include the construction of new railway lines, multi-tracking of existing routes, and gauge conversion. Port connectivity is being strengthened to facilitate seamless multimodal logistics, while the development of Gati Shakti Multi-Modal Cargo Terminals (GCTs) is improving cargo handling capabilities. A corridor-based approach is being adopted to streamline freight movement over high-density routes. Further, modernisation of rolling stock and induction of High Horse Power (HHP) locomotives are enhancing hauling capacity and asset reliability.

#### (i) Network Expansion

Capacity enhancements of railway network have been taken up by Indian railways in a big way during the last 11 years. The details of commissioning /laying of new tracks across Indian railways is given below:

Period	New Tracks Commissioned	Average Commissioning of New Tracks
2009–14	7,599 km	4.2 km/day
2014–25	34,428 km	8.6 km/day (more than two times)

As on 01.04.2025, across Indian Railways, 431 railway infrastructure projects (154 New Line, 33 Gauge Conversion and 244 Doubling projects) of total length 35,966 km, costing approximately ₹6.75 lakh crore, have been sanctioned.

The summary is given below:

Category	No. of Projects	Total Length (km)	Length Commissioned till Mar'25 (km)	Expenditure up to Mar'25 (₹ crore)
New Lines	154	16,142	3,036	1,45,318
Gauge Conversion	33	4,180	2,997	22,753
Doubling/ Multitracking	244	15,644	6,736	1,22,858
Total	431	35,966	12,769	2,90,929

## **(ii) Dedicated Freight Corridors (DFC)**

Ministry of Railways has taken up construction of two Dedicated Freight Corridors (DFC) viz. Eastern Dedicated Freight Corridor (EDFC) from Ludhiana to Sonnagar (1337 Km) and the Western Dedicated Freight Corridor (WDFC) from Jawaharlal Nehru Port Terminal (JNPT) to Dadri (1506 Km). The work on EDFC has been completed and commissioned. In WDFC, 1404 Rkm out of total 1506 Rkm has been completed and commissioned. The balance work on WDFC from Vaitarna-JNPT section (102 Rkm) has been taken up. DFC has contributed to creating additional paths on the conventional network by diverting freight traffic to EDFC and WDFC. Presently, 406 average trains per day are being run on these corridors.

## **(iii) Railway Electrification**

Electric traction is more environment friendly and energy efficient than Diesel traction. Accordingly, Electrification of railway network on Indian Railways has been taken up in mission mode. So far, 99.4 % of Broad Gauge (BG) network has been electrified. The electrification in remaining network has been taken up.

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

Period	Route Kilometre
Before 2014 (about 60 years)	21,801
2014-25	46,900

Electrification reduces dependence on fossil fuels and decreases diesel consumption, resulting in lower carbon emissions. It enables better haulage capacity and higher train speeds, leading to reduced travel time and enhanced efficiency. With electrification, there has been a reduction in diesel consumption on Indian Railways. Indian Railways has been able to save 178 crore litres of diesel in 2024-25 as compared to 2016-17, amounting to a saving of 62%, thereby reducing the import dependency on crude oil.

## **(iv) Procurement of Wagons and Locomotives**

To enhance freight-carrying capacity, large numbers of wagons have been procured and locomotives have been manufactured. During the period 2014 to 2025 about 2 lakh wagons have been procured and more than 10,000 locomotives have been added to increase freight loading capacity and operational mobility.

Besides, Ministry of Railways has schemes to attract private sector by investing in wagons including the commodity focussed specialised wagons such as wagons for cement, oil, steel, fly-ash etc. So far,

around 243 rakes of special purpose wagons and 383 rakes of general-purpose wagons are operational, which are expected to improve modal share in commodities like bulk cement, fly-ash, steel products, iron ores and coal etc. Besides, there is a separate scheme for transportation of automobiles under which around 51 rakes owned by private entities are operational.

#### **(v) Gati Shakti Multi-Modal Cargo Terminals (GCT)**

In order to boost investment from industry in development of additional terminals for handling rail cargos, 'Gati Shakti Multi-Modal Cargo Terminal (GCT)' policy has been launched. The Gati Shakti Cargo Terminals (GCTs) are being developed by private players, and can be developed on non-Railway land or fully / partially on Railway land. The location of GCTs is being decided on the basis of demand from industry and potential of Cargo traffic. So far, 124 GCTs have already been commissioned with an estimated traffic capacity of 198million tonnes per annum (MTPA).

#### **(vi) Joint Parcel Product-Rapid Cargo Service (JPP-RCS) scheme**

This scheme offer tailor-made logistics to meet specific needs of the customer and provide door-to-door parcel services. Under the scheme, provision has been made for online booking of parcel space in these services through Aggregators (in addition to India Post) on 'Virtual Aggregation Platform (VAP)'.

#### **(vii) Freight rationalization & adoption of various freight incentive schemes**

- Introduction of Gross Tonne Kilometre based haulage rate for Bulk Cement in Tank Containers.
- Cargo Aggregator Transportation Product to promote Fast- Moving Consumer Goods (FMCG), White Goods, Electronics, Automotive Components, etc.
- Liberalised Automatic Freight Rebate Scheme in Traditional Empty Flow Directions.
- Concession on Short lead traffic.
- Discount in freight to Fly Ash /Bed Ash traffic booked in Open/flat Stock & covered wagons.
- Rationalisation of Haulage rate of Automobile traffic.
- Promotion of Bamboo Traffic in North Eastern Region by granting exemption from levy of Busy Season Charge (BSC).
- To enhance the capacity of the automobile stock, various new wagons have been introduced such as ACT I, ACT II, ACT III, NMGHS, etc.
- Discount on empty haulage of containers transporting Chemical Gypsum and Tiles traffic,
- Classification of new commodities such as Potassium Sulphate, Ammonium Bicarbonate Food Grade, RUF Pitch, Liquefied Isobutylene, Liquefied Ethane, etc.

Indian Railways is leveraging advanced technologies like Artificial Intelligence (AI), Internet of Things (IoT), and Automation to enhance freight operations and reduce wagon turnaround times, Key innovations include Freight Maintenance Management (FMM), Real-Time Train Information System (RTIS), Control Chart Automation, Control Office Application (COA), Radio Frequency Identification (RFID), and integration of train timing data via RTIS/Remmlot systems and Data Loggers. The integration of FMM and COA with IoT devices has been successfully implemented to improve operational efficiency

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