GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

LOK SABHA
UNSTARRED QUESTION NO. 3393
TO BE ANSWERED ON 09.08.2023

ELECTRIFICATION OF RAILWAY LINES

†3393. SHRI GUMAN SINGH DAMOR:

Will the Minister of RAILWAYS be pleased to state:

(a) the details of the benefits of electrification of railway lines along with the total length of Broad Gauge rail line that has been electrified out of the total length of the rail route;

(b) the target of electrification of all the railway lines of the country;

(c) the efforts being made to increase the speed of the trains;

(d) the various types of signalling systems for train operation and the steps being taken to make the systems automatic;

(e) the role of PSU, RailTel of the Railways, in the control, operation and safety of Indian Railways; and

(f) the number of stations in the country where Wi-Fi internet facility has been provided?

ANSWER

MINISTER OF RAILWAYS, COMMUNICATIONS AND ELECTRONICS & INFORMATION TECHNOLOGY

(SHRI ASHWINI VAISHNAW)

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

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STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (f) OF UNSTARRED QUESTION NO. 3393 BY SHRI GUMAN SINGH DAMOR TO BE ANSWERED IN LOK SABHA ON 09.08.2023 REGARDING ELECTRIFICATION OF RAILWAY LINES

(a) and (b) Electrification offers benefits like:

- **(i) Reduced operating cost.**
- **(ii) Haulage of heavier freight trains and longer passenger trains due to higher haulage capacity of Electric Locomotives; leading to increased throughput.**
- **(iii) Increased sectional capacity by eliminating detention on account of traction change.**
- **(iv) Environment friendly mode of transport.**
- **(v) Reduced dependence on imported crude oil thereby saving precious foreign currency.**

As on 01.08.2023, total 59,524 km length of Broad Gauge (BG) rail line has been electrified.

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 the project(s). As such the confirmed time frame for completion of project(s) cannot be ascertained at this stage.

(c) Speeding up of trains is a constant endeavour and a continuous process on Indian Railways (IR). One of the objectives of rationalization of time table, undertaken by IR in a scientific manner

with the assistance of IIT-Bombay, has been speeding up trains services by converting passenger trains to Express services and Express services to Superfast services. Conversion of trains operating with conventional coaches with MEMUs is also aimed at providing faster services to the passengers. Further, Indian Railways are introducing Vande Bharat trains, which have higher speed potential. Till 3rd August, 2023, 50 Vande Bharat services have been introduced on the IR network.

Steps taken to increase the speed of the trains are:

(i) Sectional speed have been raised to 130 kmph over 10,400 route km covering the Golden Quadrilateral & diagonal routes and other important B routes of IR network.

(ii) Works for raising of sectional speed to 160 kmph on existing New Delhi-Mumbai (incl. Vadodara-Ahmedabad) and New Delhi-Howrah (incl Kanpur-Lucknow) routes have been sanctioned costing ₹ 6806 Cr. and ₹6685 Cr. respectively.

(d) Indian Railways continuously intends to modernize the existing signalling system as under:

(i) Provision of Electrical/Electronic Interlocking System with centralized operation of points and signals in place of old mechanical signalling. These systems have been provided at 6443 stations as on 30.06.2023.

(ii) Complete Track Circuiting of stations to enhance safety for verification of track occupancy by electrical means has been provided at 6381 stations upto 30.06.23.

(iii) Interlocking of Level Crossing Gates (LC) has been provided at 11102 Level Crossing Gates upto 30.06.2023 for enhancing safety at LC Gate.

(iv) Axle counters for automatic clearance of Block Section, BPAC (Block Proving Axle Counter) are provided to ensure complete arrival of train without manual intervention before granting line clear to receive next train and to reduce human element. These systems have been provided on 6412 Block Sections up to 30.06.2023.

(v) Automatic Block Signalling (ABS) has been provided at 3946 Route Km upto 30.06.2023.

(vi) Indigenously developed automatic train protection system "KAVACH" has been adopted as an aid to driver in train running within specified speed limits and also help the train running during inclement weather .

Kavach has so far been deployed on 1465 Route km and 121 locomotives (including Electric Multiple Unit rakes) on South Central Railway.

(e) RailTel maintains OFC, which provides backbone network for the control communication circuits (for control) and various other requirements such as FOIS etc. for Indian Railways.

(f) Wi-Fi facility has been provided at 6108 stations.

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