

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS**

**LOK SABHA
UNSTARRED QUESTION NO. 180
TO BE ANSWERED ON 07.12.2022**

SOLAR TRAINS

180. SHRI P.P. CHAUDHARY:

SHRI PRATAP CHANDRA SARANGI:

SHRI SANGAM LAL GUPTA:

SHRI BRIJBHUSHAN SHARAN SINGH:

DR. RAMAPATI RAM TRIPATHI:

Will the Minister of RAILWAYS be pleased to State:

- (a) whether the Government has any plans to achieve the target of making Railways a net zero emitter of Carbon Pollution by 2030, if so, the details thereof and if not, the reasons therefor;**
- (b) the steps taken by the Government to achieve the said goal since 2019; and;**
- (c) whether there exists a proposal to induct solar trains in the railway fleet, if so, the details thereof and if not, the reasons therefor?**

ANSWER

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

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

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION No. 180 BY SHRI P.P. CHAUDHARY, SHRI PRATAP CHANDRA SARANGI, SHRI SANGAM LAL GUPTA, SHRI BRIJBHUSHAN SHARAN SINGH AND DR. RAMAPATI RAM TRIPATHI TO BE ANSWERED IN LOK SABHA ON 07.12.2022 REGARDING SOLAR TRAINS

(a) and (b) Indian Railways (IR) has envisioned to achieve net zero carbon emission by 2030. Following measures have, inter-alia, been undertaken in this regard:

- i) 100% Electrification of Broad Gauge (BG) Railway network.**
- ii) About 142 Mega Watt (MW) of solar plants (both on Rooftops and on its vacant land) and about 103 MW of Wind power plants have been commissioned (till 31.10.2022).**
- iii) Use of Insulated Gate Bipolar Transistor (IGBT) based 3-phase propulsion system with regenerative braking in locomotives, Electrical Multiple Unit (EMU) trains, Mainline Electric Multiple Unit (MEMU) trains, Kolkata Metro rakes and Electric train sets.**
- iv) Conversion of End on Generation (EOG) trains into Head on Generation (HOG) trains to reduce noise, air pollution and diesel consumption.**
- v) Provision of Light emitting diode (LED) lighting in all Railway installations including Railway stations, service buildings, Residential quarters and coaches for reduction in electricity consumption.**
- vi) Afforestation of railway land to increase carbon sink.**
- vii) Green Certifications- Green Certifications of various industrial units, railway stations and other railway establishments have been done. Further, Environment Management System (EMS): ISO 14001 certification of various railway stations has also been done.**

- viii) **Construction of Eastern and Western Dedicated Freight Corridors (DFCs).**
- ix) **Installation of waste to energy plants.**

Further, IR has decided to progressively procure renewable energy to reduce energy consumption through conventional sources.

(c) At present, there is no proposal to induct solar train in the Railway fleet. The solar system works during the day time and generate battery backup of approximately 4 to 5 hours. System does not work properly during fog/rain and winter season and battery backup goes down to 2 to 3 hours depending upon weather conditions. Therefore, the system has not been pursued further.
