

**GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS**

**LOK SABHA  
UNSTARRED QUESTION NO. 679  
TO BE ANSWERED ON 20.11.2019**

**HEAD ON GENERATION (HOG) SYSTEM**

**679. SHRI GAJANAN KIRTIKAR:  
SHRI SANJAY SADASHIV RAO MANDLIK:  
SHRI SUDHEER GUPTA:  
SHRI BIDYUT BARAN MAHATO:  
SHRI DHAIRYASHEEL SAMBHAJIRAO MANE:**

**Will the Minister of RAILWAYS be pleased to state:**

- (a) whether Indian Railways has adopted an energy-efficient power supply system for coaches—the ‘Head on Generation’ (HoG) with the improvement in technology and continuous advancements in the field of power electronics, power supply systems, and control system and if so, the details thereof;**
- (b) the salient features of the HoG system and the total number of trains presently being run by the Railways under HoG across the country;**
- (c) whether the Railways is likely to save diesel cost by adopting HoG system and if so, the details thereof;**
- (d) whether the Indian Railways is also planning to convert 11 more pairs of trains to the HoG system in near future, including two Shatabdi Express, two Duranto Express and two Mail Express trains and if so, the details thereof and the additional revenue likely to be earned by the Railways; and**
- (e) whether the Railways is also planning to introduce Linke Hofmann Busch (LHB) AC coaches on several premium and mail express trains by adopting energy-efficient power supply for coaches—the HoG system and if so, the details thereof and the steps taken in this regard?**

**ANSWER**

**MINISTER OF RAILWAYS AND COMMERCE & INDUSTRY  
(SHRI PIYUSH GOYAL)**

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

**STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) OF UNSTARRED QUESTION NO. 679 BY SHRI GAJANAN KIRTIKAR, SHRI SANJAY SADASHIV RAO MANDLIK, SHRI SUDHEER GUPTA, SHRI BIDYUT BARAN MAHATO AND SHRI DHAIRYASHEEL SAMBAJIRAO MANE TO BE ANSWERED IN LOK SABHA ON 20.11.2019 REGARDING HEAD ON GENERATION (HOG) SYSTEM**

**(a) & (b) Yes, Sir. Indian Railways has adopted an energy-efficient power supply system for coaches called Head On Generation (HOG) system wherein power supply is drawn from Over Head Equipment (OHE) through converters provided in electric locomotive (WAP-7/WAP-5) for coach AC, lighting, fans etc. This system is being provided in End On Generation trains, where power cars equipped with DG sets, are provided at both the ends. The system is considered to provide a cost effective, reliable and energy efficient supply system for coaches. This eliminates use of Diesel Alternator set in power cars which creates noise & air pollution.**

**(c) to (e) Yes, Sir. There is huge saving in diesel fuel consumption of power cars with introduction of HOG system in Linke Hofmann Busch (LHB) coaches. So far, 500 trains have been converted to HOG system resulting in approx. savings to the tune of ₹ 1182.22 crore per annum. During 2019-20, it is planned to convert balance (200 trains) End On Generation (EOG) LHB rakes into HOG system. By conversion of such trains, Indian Railways is likely to save approx. ₹ 470 crore per annum.**

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