GOVERNMENT OF INDIA
RAILWAYS
LOK SABHA

UNSTARRED QUESTION NO:3131
ANSWERED ON:29.08.2013
USE OF UNCONVENTIONAL FUEL
Bauri Smt. Susmita;Chaudhary Shri Arvind Kumar

Will the Minister of RAILWAYS be pleased to state:

(a) the present status of progress made in the use of bio-diesel/CNG/LNG in running of trains in the country;

(b) the steps taken/being taken by the Railways to expedite the implementation process;

(c) the financial implications involved therein along with the likely advantages to the Railways as a result thereof;

(d) whether any assessment has been made to ascertain the likely reduction in the level of pollution with the use thereof vis-Ã -vis conventional fuel; and

(e) if so, the details and the outcome thereof?

Answer

MINISTER OF STATE IN THE MINISTRY OF RAILWAYS (SHRI ADHIR RANJAN CHOWDHURY)

(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. 3131 BY SHRI ARVIND KUMAR CHAUDHARY AND SHRIMATI SUSMITA BAURI TO BE ANSWERED IN LOK SABHA ON 29.08.2013 REGARDING USE OF UNCONVENTIONAL FUEL.

(a) Bio-Diesel:

Trials with Bio-Diesel blend of upto 20% have been done on a few locomotive in Northern, South Eastern & Southern Railways. No large scale induction of Bio-Diesel as an alternate fuel has been done due to non-availability of Bio-Diesel in large quantities at economical prices. However, very small scale operations in Southern Railway, primarily on shunting locomotives has been continuing for past many years.

LNG:

At present LNG is not being used in Railway traction.

CNG:

One Diesel Power Car (DPC No. 19002 of Shakurbasti Diesel Shed) has been converted to CNG-diesel dual-fuel mode and is running successfully in services at present.

(b) Bio-Diesel: Railways have decided to set up two in-house Bio-Diesel plants of 30 Tonnes per day each. The plants will be located at Tondiarpet (Chennai) in TamilNadu and Raipur in Chattisgarh. In addition efforts are also being made to procure Bio-Diesel from trade. Works are in progress in both locations.

LNG:

Railway Board have sanctioned a work of conversion of 20 diesel Locomotives to dual fuel mode with LNG as substitute fuel.

CNG:

Sanction for conversion of 100 Diesel Power Cars (DPC) exists and contract for 50 nos. have been awarded and process of conversion has been initiated. Presently two DPCs are under conversion which will be completed in four months from now.

(c) Bio-Diesel:

No market discovery has been made, as no tenders have been finalized for the procurement of bio-diesel. However, the primary reason for using bio-diesel is reduced emission and foreign exchange savings.

CNG/LNG:

With present trend of working of DPCs, with CNG, there would be an estimated saving of 16.5% in fuel consumption when 20% of CNG is used in DPCs.

(d & e) Bio-Diesel:

RDSO has carried out detailed engine studies with bio-diesel and found the following reduction in emission with 100% bio-diesel as compared to diesel:

Carbon dioxide (CO2) 78%

Carbon monoxide (CO) 43%

Particulate matter 55.4%

Unburned Hydrocarbons 56.3%

CNG/LNG:

Studies by different sources on the use of CNG/LNG indicate reduction in pollutants vis-Ã -vis diesel approximately as below:

CO reduction by 90-97%

CO2 reduction by 25%

NOx reduction by 35-60%

HC emission reduction by 50-75%

No particulate matter