GOVERNMENT OF INDIA
RAILWAYS
LOK SABHA

STARRED QUESTION NO:465
ANSWERED ON:27.04.2015
USE OF CNG TO RUN TRAINS
Lekhi Smt. Meenakashi

Will the Minister of RAILWAYS be pleased to state:

(a) the average expenditure incurred on fuel in the Railways, diesel, electricity and other sources of energy separately;

(b) whether the Railways are using or propose to use Compressed Natural Gas (CNG) to run trains so as to reduce its dependency on polluting fuels and if so, the details thereof;

(c) the expected reduction in consumption of diesel and its impact on limiting carbon emissions in the railway sector;

(d) whether the Railways have also stressed on the use of other alternative fuel in near future and if so, the details thereof; and

(e) the extent to which it is likely to be beneficial to the Railways?

Answer

MINISTER OF RAILWAYS (SHRI SURESH PRABHAKAR PRABHU)

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

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) OF STARRED QUESTION NO 465 BY SHRIMATI MEENAKASHI LEKHI TO BE ANSWERED IN LOK SABHA ON 27-04-2015 REGARDING USE OF CNG TO RUN TRAINS

(a): Total expenditure on consumption of different sources of energy for traction on Railways during the year 2012-13 and 2013-14 is given below:

(In Rs. Crore)

Source of Energy	2012-13	2013-14
Electricity	8,583.52	9,741.09
Diesel	13,702.27	19,415.53
Coal	0.75	0.58
Total	22,286.54	29,157.20

(b): Yes, Madam. Indian Railways has launched a CNG DEMU train on dual fuel mode on Rewari-Rohtak section of Northern Railway.

(c): Consumption of diesel will come down according to Substitution percentage of diesel by CNG and number of CNG DEMUs converted. Exhaust emissions are dependent on various parameters viz. quality of fuel used, ambient conditions during measurement, operator handling practices, performance level/technology adopted at base engine etc. The impact of using CNG in dual fuel mode in DEMU engines is approximately as given below.

Substitution of diesel by CNG	% Reduction in CO2 (%)	Reduction in NOx (%)	Reduction in PM(%)
20	6	16	18
65	19	52	60
80	23	64	73

(d): Yes, Madam. In addition to natural gas, bio-diesel has also been selected as an alternate fuel.

(e): Operational costs of traction are dependent on the comparative cost of fuel viz. Natural gas and diesel as well as diesel locomotive duty cycle. If compared on per 100 Kms of run, the cost in dual fuel mode is expected to be lesser by 7.9 % on 20% substitution of diesel by CNG, 25.7% on 65% substitution of diesel by CNG and 31.7% on 80% substitution of diesel by CNG. (Assuming current prices of CNG and diesel in New Delhi on 15/03/2015 as 38.15 Rs/ Kg and 47.28 Rs/ litre respectively.)