GOVERNMENT OF INDIA
PETROLEUM AND NATURAL GAS
LOK SABHA

STARRED QUESTION NO:495
ANSWERED ON:10.05.2012
MODERNISATION OF REFINERIES
Rawat Shri Ashok Kumar

Will the Minister of PETROLEUM AND NATURAL GAS be pleased to state:

(a) the status of technology being used in the oil refineries in the country as compared to the international levels;

(b) whether the Public Sector units have initiated modernization process;

(c) if so, the details thereof; and

(d) the likely impact of the same in the production?

Answer

MINISTER OF PETROLEUM AND NATURAL GAS (SHRI S. JAIPAL REDDY)

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

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF LOK SABHA STARRED QUESTION NO.495 BY SHRI RAJEN GOHAIN AND SHRI ASHOK KUMAR RAWAT TO BE ANSWERED ON 10TH MAY, 2012 REGARDING MODERNISATION OF REFINEIRES

(a) Indian refineries have been continuously upgrading their technologies in line with the Auto Fuel Policy and as per their operational requirement.

(b) and (c): Yes, Madam. The details of modern technologies employed in the public sector refineries is given below :
Apart from primary processing technologies, viz., Crude Oil Fractionation by Atmospheric Distillation and Vacuum Distillation for initial separation, the major modern process technologies employed across PSU refineries for producing petroleum products include:
I. Secondary/Upgradation Technologies for yield improvement :
(i) Thermal cracking processes, viz., Visbreaking, Delayed Coking
(ii) Fluidised Catalytic Cracking, INDMAX Technology
(iii) Hydrocracking
II. Quality UpgradationTechnologies :
(i) Catalytic Reforming, Isomerisation, Alkylation, Prime G for meeting the quality specifications of Petrol w.r.t. octane number, benzene content, aromatics, olefins, sulphur, distillation etc.
(ii) Diesel Hydro-desulphurisation (DHDS), Diesel Hydro-treating (DHDT) for reduction of sulphur & PAH (Poly Aromatic Hydrocarbons) and cetane number improvement of diesel.
Further, in line with the Auto Fuel Policy, Lead was phased out from Petrol completely from 01.02.2000 and. BS-IV grade auto fuels in major cities and BS-III grade auto fuels in the rest of the country were introduced in 2010. Oil industry has invested over Rs 32,000 crore in upgrading facilities in refineries for production of BS-III/IV auto fuels.

(d) Adoption of modern technologies by Indian refineries has helped in increasing the distillate yield, quality upgradation of petrol/diesel and reduction in specific energy consumption. The industry average distillate yield (% wt. on crude) has improved from 75.0% in 2009-10 to 76.8 %(provisional) in 2011-12. Similarly the industry average of specific energy (MBN) has come down from 68 in 2009-10 to 63 (provisional) in 2011-12.
MBN-MBTU/BBL/NRGF, where the term MBTU refers to total heat value of fuel and loss in thousand BTU, BBL refers to barrel of crude processed and NRGF is a derived factor that depends upon actual intake in both primary and secondary processing units as per industry standard