



**STANDING COMMITTEE ON
PETROLEUM & NATURAL GAS**

(2014-15)

SIXTEENTH LOK SABHA

MINISTRY OF PETROLEUM & NATURAL GAS

**ETHANOL BLENDED PETROL & BIO DIESEL
POLICY**

SEVENTH REPORT



**LOK SABHA SECRETARIAT
NEW DELHI**

August, 2015/Shravana, 1937 (Saka)

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Presented to Lok Sabha on 13.08.2015

Laid in Rajya Sabha on 13.08.2015



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NEW DELHI**

August, 2015/Shravana, 1937 (Saka)

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Sl. No.	Name of Members
	LOK SABHA

- 2 Dr. Ravindra Babu
- 3 Shri P. K. Biju
- 4 Shri Kalikesh N. Singh Deo
- 5 Shrimati Rama Devi
- 6 Shri Elumalai V.
- 7 Shri Naranbhai Kachhadiya
- 8 Dr. Thokchom Meinya
- 9 Shrimati Pratima Mondal
- 10 Shri Ashok Mahadeorao Nete
- 11 Shrimati Jayshreeben Patel
- 12 Shrimati Anupriya Patel
- 13 Shri Arvind Sawant
- 14 Shri Raju Shetty
- 15 Dr. Bholu Singh (Begusarai)
- 16 Shri Ravneet Singh
- 17 Shri Kamakhya Prasad Tasa
- 18 Shri Rajesh Verma
- 19 Shri Om Prakash Yadav
- 20 Shri Laxmi Narayan Yadav
- 21 Shri A.T. Nana Patil

22	Shri Mani Shankar Aiyar
23	Shri Ishwarlal Shankarlal Jain
24	Shri Prabhat Jha
25	Shri Bhubaneshwar Kalita
26	Shri Mansukh L. Mandaviya
27	Shri Ahmed Patel
28	Shrimati Gundu Sudharani
29	Prof. Ram Gopal Yadav
30	Shri Sharad Yadav
31	Shri Praful Patel

1.	Shri A.K.Singh	Additional Secretary
2.	Shri S.C.Chaudhary	Director
3.	Shri H.Ram Prakash	Additional Director
4.	Ms. Sonia Khanna	Committee Officer

(iv)

INTRODUCTION

I, the Chairperson, Standing Committee on Petroleum & Natural Gas having been authorised by the Committee to submit the Report on their behalf present this Seventh Report on "Ethanol Blended Petrol & Bio Diesel Policy".

2. The Committee took evidence of the representatives of the Ministry of Petroleum & Natural Gas at their sittings held on 4.12.2014, 7.1.2015 and 11.6.2015.

3. The Committee considered and adopted the Report at their sitting held on 11.8.2015.

4. The Committee wish to express their thanks to the representatives of the Ministry of Petroleum and Natural Gas, Public Sector Undertakings/ Organisations, the representatives of Indian Sugar Mills Association (ISMA), Ethanol Manufacturers Association of India and other Sugar Mills for placing their views before the Committee and for furnishing the desired information in connection with examination of the subject.

5. The Committee also place on record their appreciation for the assistance rendered to them by the Officers of the Lok Sabha Secretariat attached to the Committee.

New Delhi;
August, 2015
Shravana, 1937 (Saka)

PRALHAD JOSHI,
Chairperson,
Standing Committee on
Petroleum & Natural Gas.

PART - I

Introductory

Energy is a critical input for the socio-economic development of any country. In India, fossil fuels i.e. Crude Oil and Natural Gas play a dominant role as primary energy resources constituting about 41% of the energy consumption. Since the domestic production of these fossil fuel based hydrocarbon resources is inadequate to meet the rapidly increasing energy demand, India imports 80% of its Energy requirements from the international market causing substantial outflow of precious resources in fuel import bill of the country. Though, India is able to receive supplies of fuel resources at present, its dependence on imports in the changing world scenario and geo-political instability can lead to crude oil supply disruptions at any time posing a threat to the energy security of the country. The growing environmental concerns have also raised uncertainty over the use of fossil fuel resources in meeting the future energy demands and has necessitated the search for alternate sources of energy.

1.2 Bio-fuels are derived from renewable Bio-mass resources and therefore, provide a strategic advantage to promote sustainable development and to supplement conventional energy resources in meeting the rapidly increasing requirements for transportation fuels. Bio-fuels can contribute towards satisfying rapidly increasing energy needs in an environmentally benign and cost- effective manner while reducing dependence on import of fossil fuels and thereby enhancing National Energy Security. Many countries in the world have successfully implemented Bio-fuel programmes, Brazil being the leader where some fleets of vehicles are running at 100% Ethanol based fuels. Brazil is the largest producer of sugarcane in the world and its Ethanol based fuel programme is based on sugarcane mainly, while in US, corn is used for production of Ethanol for running bio-fuel programme. India being one of the world's largest sugarcane producers can also reap the benefits by successful implementation of Bio-Fuels programme.

GLOBAL SCENARIO OF USE OF ETHANOL AS FUEL (reply 37(i))

1.3 As per the information received from Department of Chemicals & Petrochemicals, in India ethanol is produced mainly from molasses which is a by-product during production of sugar from sugar cane as compared to production of ethanol in USA which is mainly from corn and in Brazil, it is from sugar cane juice/molasses. The current practices in countries like Brazil & USA, are as follows:

(a) Brazil is one of the major Bio-ethanol (from sugarcane) producers and the exporter. The sugar and Ethanol industry in Brazil contributes about 2.3% of the GDP. In Brazil, few facilities are dedicated to produce exclusively Ethanol from sugar cane juice and no sugar. Some units are using sugar cane juice and molasses mixed in different proportions for production of ethanol. The ethanol production in Brazil is about 14 times of the Indian production.

(b) USA is the major producer of ethanol from corn due to abundance production of corn in the country. Ethanol from sugar cane juice is not being produced in USA. The ethanol production in USA is about 26 times of the Indian production.

1.4 Global bio-fuel consumption and production increased to a total of 116.6 billion litres in 2013, following a slight decline in 2012. World fuel ethanol volumes were up by around 5% to 87.2 billion litres. Global ethanol production was dominated by the United States and Brazil, which retained their top spots and accounted for 87% of the global total. U.S. ethanol production in 2013, at around 50 billion litres and almost all of this was made from corn feedstock. Ethanol displaced about 10% of U.S. gasoline transport demand during the year. Besides, nearly 2.4 billion litres was exported to Canada (54%) and the Philippines (9%); the United Arab Emirates, Brazil, Mexico and Peru.

1.5 Brazil increased its sugarcane ethanol production by 18% in 2013, to reach around 25.5 billion litres. Argentina nearly doubled its ethanol production to almost 0.5 billion litres, with the opening of a large corn ethanol plant. The expansion was driven by Argentina's 5% ethanol fuel blend mandate. Other significant producers of ethanol included China (2 billion litres) and Canada (1.8 billion litres).

Ethanol Blended Petrol (EBP)

1.6 Ethanol, an anhydrous ethyl alcohol having chemical formula of C_2H_5OH , can be produced from sugarcane, corn, wheat, etc., which are having high starch content. In India, ethanol is mainly produced from sugarcane molasses by fermentation process. Ethanol can be mixed with gasoline to form different blends. As the ethanol molecule contains oxygen, it allows the engine to more completely combust the fuel, resulting in fewer emissions and thereby reducing the occurrence of environmental pollution. Since ethanol is produced from plants that harness the power of the sun, ethanol is also considered as renewable fuel. Asked as to what will be the impact of EBP on emission levels, the Ministry in a written reply submitted following information:-

"BPCL has informed that as per literature report, EBP reduces emissions, except for evaporative emissions.

Ethanol contains 35% oxygen. Adding oxygen to fuel results in more complete fuel combustion, reducing harmful tailpipe emissions. Ethanol is non-toxic, water soluble and quickly biodegradable. Because ethanol is made from renewable, plant-based feed stocks, the CO_2 released during a vehicle's fuel combustion is "recycled" during the growth of ethanol feed stocks.

Additionally, ethanol-blended fuels reduce tailpipe emissions of volatile organic compounds, which readily form ozone in the atmosphere. These reductions more than offset any slight increases of evaporative emissions due to the higher volatility of ethanol-blended fuel."

1.7 Asked to furnish a comparative statement for emissions from ethanol, petrol and various blends of ethanol blended petrol i.e. 5%, 10% and higher, the Ministry submitted as under:-

"A comparative statement of Mass Emissions and Fuel Economy using ethanol blends (5% & 10%) in two wheelers and cars is given below:

Results of Mass Emission and Fuel Economy using Ethanol Blends
(the data is based on the study of IOC (R&D))

	<u>Hero Puch</u>		
	CO	THC	FE
	(g/km)	(g/km)	(kpl)
Com. Gasoline	3.29	3.44	47.47
5% Ethanol	3.05	3.75	48.50
10% Ethanol	2.37	3.59	48.70

BAJAJ CLASSIC SCOOTER

	CO (g/km)	THC (g/km)	FE (g/km) (kpl)
Com. Gasoline	2.57	3.51	46.10
5% Ethanol	2.13	3.37	46.70
10% Ethanol	1.86	3.57	45.55

HERO HONDA MOTOR CYCLE

	CO (g/km)	THC (g/km)	FE (g/km) (kpl)
Com. Gasoline	1.838	0.479	49.20
5% Ethanol	1.203	0.368	49.80
10% Ethanol	1.015	0.235	51.63

HERO PUCH MOPED WITH CATALYTIC CONVERTER

	CO (g/km)	THC (g/km)	FE (g/km) (kpl)
Com. Gasoline	2.74	3.29	49.85
5% Ethanol	1.58	1.10	48.95
10% Ethanol	1.18	1.00	50.30

MARUTI 800 MPFI CAR

	CO (g/km)	THC (g/km)	NOx (g/km)	FE (kpl)
Com. Gasoline	0.831	0.177	0.058	20.82
5% Ethanol	0.738	0.064	0.117	23.45
10% Ethanol	0.614	0.059	0.070	21.52

MATIZ CAR

	CO (g/km)	THC (g/km)	NOx (g/km)	FE (kpl)
Com. Gasoline	1.697	0.210	0.074	19.99
5% Ethanol	0.396	0.230	0.082	21.77
10% Ethanol	1.410	0.217	0.098	20.13

OPEL ASTRA CAR

	CO (g/km)	THC (g/km)	NOx (g/km)	FE (kpl)
Com. Gasoline	6.702	0.657	1.271	14.75
5% Ethanol	5.126	0.499	1.369	15.39
10% Ethanol	4.196	0.448	1.456	14.70"

1.8 During 2001, pilot projects on Ethanol Blended Petrol started at 3 locations i.e. at Miraj, Manmad (Maharashtra) and Aonla/Bareilly in Uttar Pradesh. The Government of India decided to launch Ethanol Blended Petrol (EBP) Programme in January, 2003 for supply of 5% ethanol blended Petrol. Subsequent to this, Ethanol Blended Petrol

programme was launched in January, 2003 in 9 States i.e. Maharashtra, Gujarat, Goa, Uttar Pradesh, Haryana, Punjab, Karnataka, Andhra Pradesh, Tamil Nadu and 4 Union Territories. The Ministry of Petroleum & Natural Gas (MoP&NG) vide its notification dated 20th September, 2006 directed the Oil Marketing Companies (OMCs) to sell 5% Ethanol Blended Petrol subject to commercial viability as per Bureau of Indian Standards specifications in notified 20 States and 4 UTs with effect from 1st November, 2006. In November, 2006, EBP was extended to 10 States including Delhi, Himachal Pradesh, Madhya Pradesh, Chandigarh, Kerala, Rajasthan, West Bengal, Orissa, Bihar and Jharkhand. However, North-Eastern States, J&K, Andaman & Nicobar islands and Lakshadweep Islands have not been covered under the programme.

1.9 When asked as to whether there is any proposal to extend EBP programme to North-Eastern States, the Ministry informed as under:-

"Presently, there is no proposal before the Government to extend EBP Programme to North Eastern States. As per the information received from BPCL, there is no sugarcane production/cultivation in the North Eastern States and there is long distance from surplus sugarcane producing states i.e. Uttar Pradesh. The cost of transportation is also high. Most of the locations in North Eastern States are flood prone and heavy monsoon leads to moisture absorption in ethanol blended petrol which is a deterrent. The existing POL locations are very old and extremely congested with no scope to put facilities for ethanol storage and blending."

1.10 The Cabinet Committee on Economic Affairs (CCEA) in its meeting held on 22nd November, 2012 decided that (i) 5% mandatory ethanol blending with petrol as already decided by CCEA in the past, should be implemented across the country; (ii) procurement price of ethanol will be decided henceforth between OMCs and suppliers of ethanol; and (iii) the 5% mandatory blending will be reckoned for the country as a whole and it be achieved by 30th June, 2013. Accordingly, a Gazette Notification was issued directing OMCs to sell ethanol blended Petrol with percentage of ethanol upto 10% as per BIS Specification to achieve 5% ethanol blending across the country as a whole.

1.11 The progress made in pursuance of the decision taken on 22nd November, 2012 was apprised to CCEA on which CCEA decided that:

"(i) OMCs will procure ethanol (produced from molasses route only) from domestic sources to achieve the mandatory requirement of 5% ethanol blending with Petrol by October 2013 in areas/parts of the country where sufficient quantity of ethanol is available,

(ii) in other parts of the country, blending of ethanol may be increased progressively depending upon the availability of ethanol to reach the 5% mandatory level; and

(iii) OMCs and Sugar Industry Associations may interact with each other on a regular basis to achieve the target."

1.12 When asked about the quantities of ethanol required on annual basis for implementing 5% blending of ethanol with petrol across the country, the Ministry informed that it is estimated that PSU OMCs require approx. 134 crore litre of Ethanol based on the petrol demand for achieving overall blending of 5% ethanol for the EBP Programme. The estimated Motor Spirit (MS) demand for OMCs on 12th Five Year Plan Document is as follows and ethanol demand is calculated based on 5% blending in Petrol.

Year	Est. Petrol Demand (TKL)	Est. Ethanol Demand (TKL)
15-16	29301	1465
16-17	31872	1593
17-18	34608	1730

1.13 The availability of Ethanol for Ethanol Blended Petrol Programme during the years 2006-2014 and the prices at which these quantities were offered are as under:-

(Qty. in Cr. Litre)						
Sugar year	2006-09	2009-10	2010-11	2011-12	2012-13	2013-14
Oil Industry Requirement	181.5	68.9	105	101	103	140
Quantity finalised	146.6	27.56	55	41	32	65
Actual Procurement	58.7	55	36	26	Nil	47
% of Contracted Quantity	40%	20%	65%	63%	0%	73%
% of Required Quantity	32%	8%	34%	26%	0%	34%
Procured Price/Litre	Rs.21.50*	Rs.27.00*	Rs.27.00*	Rs.27.00*	Rs.27.00*	Rs.39.45**

Price of Ethanol at sugar factory gate. Taxes and transportation upto destination reimbursed.

delivered price of ethanol at locations of oil companies.

State-wise breakup of the quantities of Ethanol as on 19.01.2014 is as under:-

Sl. No.	State	Total Industry Rqmt in KL	Qty offered by Bidders in KL	LOI Quantity	PO Quantity	Receipt Quantity as on 19.1.2014	% achieved against PO Quantity
1	Andhra Pradesh	103121	49100	21600	21772	20480	94%
2	Delhi	56189	41900	19100	35674	17379	49%
3	Gujarat	68268	6100	1000	999	618	62%
4	Haryana	53797	38084	36084	18492	13241	72%
5	Karnataka	147982	59000	45700	45702	26745	58%
6	Maharashtra	315252	47600	38800	26104	21505	82%
7	Punjab	46051	28500	27359	28183	8703	31%
8	Rajasthan	48561	4800	4000	4000	900	23%
9	Tamil Nadu	116176	48000	36719	36717	10651	29%
10	Uttar Pradesh	201876	208300	169341	164559	84478	51%
11	Uttarakhand	15134	400	400	0	0	0
	Total		550784	400103	382192	204700	54%

Procurement Of Ethanol From Domestic Suppliers

1.14 When the Committee enquired about various procedures adopted for procurement of ethanol from sugar and distillery industry and the results achieved so far during the last five years, the Ministry informed as under:

"EBP procurement during 2006-09:

OMCs had implemented 5% EBP program by arranging procurement of ethanol through joint industry public tender. Supply orders were finalised by OMCs for 146.6 crore litres against requirements of 181.54 crore litres for 18 States. It may be noted that the landed rates quoted by the tenderers in the tender was much higher as compared to the bench mark price. This resulted in lower contracted quantity. Further, the actual supplies received were even lower at only 58.7 crore litres during the said period.

EBP procurement during 2009-10:

Industry floated fresh public tender in June 2009 for procurement of ethanol for period from November, 2009 to October, 2010 for 20 States. Against the

requirement of 75.16 crore litres on Industry basis, the quotes received were only 40% of total requirement. For these tenders also the landed rates quoted by the tenderers in the tender was much higher as compared to the bench mark price. Despite negotiations no reduction could be achieved. Industry could procure only 5.60 crore ltrs during the period.

EBP procurement during October-10 to September-11:

MoP&NG vide Notification dated 1st September, 2010, directed implementation of 5% EBP programme effective 1st September, 2010 in 20 States. Accordingly, Industry made arrangements for procurement of ethanol at an adhoc uniform ex-factory price of Rs. 27 per litre ethanol which is exclusive of taxes, levies & transportation based on the recommendations of the working group constituted. The offers were sought for the period from 1st September, 2010 to 30th September, 2011 to meet annual industry requirement of 105.1 crore litres. However due to less offers & availability, Industry could procure 36.25 crore litres during the cycle ending September, 2011.

EBP procurement during October-2011 to September 2012:

Oil Industry floated fresh Expression of Interest (EOI) on 11th August, 2011 for seeking offers for supply of ethanol for the cycle 1st October, 2011 to 30th September, 2012. Due to non-availability of ethanol, EBP could not be started in the States/UT of West Bengal, Odhisa, Jharkhand, Chattisgarh, Madhya Pradesh, Rajasthan, Tamilnadu and Puducherry. All India Industry requirement was 100.08 crore litres & Industry could procure 30.57 crore litres during the cycle ending September, 2012 due to less ethanol offers & availability.

EOI floated for period October-2012 - September-2013:

A fresh EOI was floated by the Industry on 24th July, 2012 for next cycle starting from October, 2012 to September, 2013. EOI was opened on 14th August, 2012. LOI was issued to suppliers during September-October, 2012 after Evaluation & Allocation. Subsequent to CCEA decision on 22nd November, 2012 that ethanol procurement will be henceforth decided through open tender system, none of the vendors (Except HPCL Bio-fuels Ltd Bihar) responded to LOIs issued to them against EOI 2012-13.

Tenders floated by OMCs in December 2012 and July 2013

The OMCs had floated two tenders for procurement of ethanol in December 2012 and July, 2013. The July 2013 tender was followed up by an Expression of Interest (EOI) in January, 2014. The quantity of ethanol required by OMCs and supplied quantity of the same in these three tenders / EOI till 21st December, 2014 is given in the table below :-

Tender for 2014

A new tender for ethanol procurement (valid for the period November 2014 to October 2015) was floated by OMCs on 9th July, 2014. OMCs sought to procure 156 crore litres of ethanol by this tender. They have received offer of 58.35 crore litres and could finalise a quantity of 35.52 crore litres of ethanol.

EOI in December 2014

During December 2014, Government has fixed ethanol price in three slabs as per distance between Sugar Mills and OMCs Depot. EOI has been floated on 29.12.2014 for the quantity of 97 crore litres as per this new mechanism, which is to be opened on 12.01.2015."

1.15 When asked about the details of quantity of ethanol that OMCs have been able to receive through tendering mode, the Ministry submitted following information:

"The quantity of ethanol required by OMCs and supplied quantity of the same in these three tenders / EOI till 21st December, 2014 is given in the table below:-

(figures in crore litre)

Tender	Period	OMC requirement	Offered Quantity to OMCs	Finalized Quantity for OMCs	Supplied quantity to OMCs
December 2012 Tender	July 2013 to June 2014	140.4	55	39.8	33.83
July 2013 Tender	December 2013 to November 2014	133.2	61.8	25.2	16.90
January 2014 (EOI)	May 2014 to November 2014	24.3	5.37	5.37	3.35
Total		297.9	122.17	70.37	54.08

(2) A new tender for ethanol procurement (valid for the period November 2014 to October 2015) was floated by OMCs on 9th July, 2014. OMCs sought to procure 156 crore litres of ethanol by this tender. They have received offer of 58.35 crore litres and could finalise a quantity of 35.52 crore litres of ethanol."

1.16 It is seen from above that against the Tender/EOI floated for total quantity of 297.9 crore litres of ethanol, the OMCs have received offer of 122.17 crore litres and could finalize 70.37 crore litres only. The percentage of finalized quantity to the required quantity ranges between 18.9 % to 28.3 %.

1.17 A new tender for ethanol procurement (valid for the period November 2014 to October 2015) was floated by OMCs on 9th July, 2014. OMCs sought to procure 156 crore litres of ethanol by this tender. They received offer of 58.35 crore litres and could finalise a quantity of 35.52 crore litres of ethanol. No offers were received for supply in the States of Odisha, Jharkhand, Chhattisgarh and Kerala.

1.18 In order to improve the availability of ethanol, the CCEA in its meeting held on 10.12.2014, has decided as follows:

"(i) The delivered price of Ethanol would be fixed in the range of Rs. 48.50 per litre to 49.50 per litre, depending upon the distance of distillery from the depot/installation of the OMCs as per the slabs given below:

Distance of distillery in km.	Rs. Per Litre
0-100	48.50
101-300	49.00
>300	49.50

(ii) The rates mentioned above would be delivered price and inclusive of all Central and Statutory levies, transportation cost, etc. which would be borne by the Ethanol suppliers.

(iii) If the need arises to reduce the Retail Selling Price (RSP) of Petrol, then such reduction would proportionately factor in the requirement of maintaining the fixed cost of purchase of Ethanol.

(iv) The OMCs will incorporate "Supply or Pay" clause duly backed up with bank guarantee up to 10% of the order value in their Supply agreement with Ethanol suppliers.

(v) OMCs will sign Memorandum of Understanding (MOU) with the State Governments for a comprehensive system for un-interrupted inter-depot transfer of Ethanol within and outside the State. This may include annual excise permits to OMCs for movement of Ethanol both within and outside the State and other relevant and necessary measures."

1.19 Further, in its meeting on 10th December, 2014, the CCEA has also decided as follows:

"(i) The adhoc ex-factory price of Rs. 27/litre fixed by CCEA on 16th August, 2010 in relation to ethanol may be treated as final for the period August, 2010 to November, 2012.

(ii) Ethanol produced from other non-food feedstock besides molasses, may also be allowed to be procured, subject to meeting the relevant BIS standards."

1.20 It has been informed by the Ministry that presently, EBP Programme is being implemented in the notified 21 States and 4 UTs. Jammu & Kashmir, North Eastern States, Islands like Andaman & Nicobar islands are not covered in EBP Programme. Response in recently held Tender (i.e. July' 14 Tender) was received mainly for Uttar Pradesh, Maharashtra, Karnataka, Goa, Andhra Pradesh & Telangana. There was either Nil or Negligible response for other States. Reason for Nil or Negligible Response

for other states could be lack of Sugarcane cultivation/distilleries in those states and also cumbersome state excise procedures for the interstate movement of ethanol.

1.21 OMCs had floated a fresh domestic tender on 22nd July, 2013 for the period from 1st December, 2013 to 30th November, 2014 for a quantity of 133.2 crore litres of ethanol for blending with petrol. A state wise breakup for the quantities of ethanol finalized during the tender floated on 22.7.2013, is given under:-

Sl. No.	State	JANUARY TENDER			JULY TENDER		
		Qty. reqd. in KL	Qty offered in KL	Qty. Finalised	Qty. reqd. in KL	Qty offered in KL	LOI Qty. Finalised
1	Andhra Pradesh	103121	49100	21772	96092	72790	59297
2	Delhi	56189	41900	35674	59935	53000	21001
3	Gujarat	68268	6100	999	57421	12900	0
4	Haryana	53797	38084	18492	54543	81400	17101
5	Karnataka	147982	59000	45702	150600	84400	19889
6	Maharashtra	315252	47600	26104	321292	102537	72305
7	Punjab	46051	28500	28183	50757	43500	0
8	Rajasthan	48561	4800	4000	52973	28000	2500
9	Tamil Nadu	116176	48000	36717	125151	9375	0
10	Uttar Pradesh	201876	208300	164559	100527	72150	42535
11	Uttarakhand	15134	400	0	19024	8500	0
12	Bihar	0	0	0	30629	2100	1500
13	Chhattisgarh	0	0	0	13361	4500	0
14	Goa	0	0	0	18337	9500	6001
15	Jharkhand	0	0	0	17266	0	0
16	Kerala	0	0	0	66101	10000	0
17	Madhya Pradesh	0	0	0	39950	13500	0
18	Odisha	0	0	0	26537	0	0
19	West Bengal	0	0	0	31993	10000	10000
	Total		550784	382192	1332489	618152	252129

1.22 It was informed by the Sugar Industry that the delay in issuance of tenders by OMCs for purchase of Ethanol causes Sugar mills to supply available Ethanol to other sectors limiting the supply to OMCs for EBP Programme. Asked about the reasons for delay in issuance of tenders by OMCs, following reply was submitted by the Ministry:-

“Tenders have been floated by OMC’s in the month of July much before the commencement of sugar year for receiving ethanol supplies. In order to improve the availability of ethanol, the Government on 10.12.2014 *inter alia*, decided to fix the delivered price of ethanol in the range of Rs.48.50 per litre to 49.50 per litre. Subsequently, Expressions of Interest (EOI’s) were floated in the month of December, 2014, March, 2015, May, 2015 and June 2015 seeking balance quantities of ethanol to be supplied to OMC depots. Thus suppliers can quote for the quantities at the desired location of OMC’s on a monthly basis.”

1.23 The Committee were informed that the CCEA in its meeting held on 22nd November, 2012 *inter alia* decided that in case of any shortfall in domestic supply, the OMCs and Chemical companies are free to import ethanol. Pursuant to this decision, a global tender was floated by OMCs on 18th January, 2013 for 82.03 crore litres of ethanol, against which, 4 qualified vendors offered a quantity of 70 crore litres at the landed price varying from Rs. 69.45 – 91.98 per litre. As no substantive reduction could be achieved in three rounds of negotiations, the global tender was closed by the OMCs. The situation was apprised to CCEA vide this Ministry’s Cabinet Note dated 23rd May, 2013, on which CCEA decided on 3rd July, 2013 that OMCs will procure ethanol only from domestic sources to achieve the requirement. The Committee enquired as to whether the Ministry has done any analysis regarding the benefits against the high cost of import to apprise CCEA for allowing import of Ethanol, the Ministry informed as under:-

"In view of the high prices offered by the vendors against the global tenders floated by OMCs for procurement of ethanol, the proposal for import of ethanol was dropped. It was not found feasible to procure ethanol at much higher price than the Petrol price, since blending of such ethanol in Petrol will further raise the price of ethanol blended Petrol."

Constraints in implementation of EBP Programme:-

1.24 The Committee note that the average blending at present in the country is about 1.9%. Asked about the main constraints being faced in the implementation of Ethanol Blended Petrol Programme by the Government, the Ministry informed as under:

"During implementation of EBP programme, OMCs as well as ethanol suppliers are facing certain impediments in the smooth implementation of the programme due to different procedural practices adopted by Excise Departments of different States in issuance of excise licenses. The procedural chain is cumbersome involving a number of formalities to be completed with various authorities and is adversely impacting EBP implementation. For Inter-State movement of ethanol,

issuance of Import/Export NOC & permits by State Excise also leads to delay in smooth implementation of the Programme.

(2) Further, sufficient quantity of Ethanol is also not available for blending with Petrol. Suppliers have offered lower quantity during Tenders coupled with high rates and also the offered quantity of ethanol could not be received from bidders completely.

(3) However, in order to give fillip to the EBP Programme, the CCEA in its meeting held on 10.12.2014 has, inter-alia, decided to fix the delivered price of ethanol in the range of Rs.48.50 per litre to 49.50 per litre, depending upon the distance of distillery from the depot/installation of the OMCs, inclusive of all central and statutory levies, transportation cost etc, which would be borne by the Ethanol suppliers. OMCs will sign MoU with the State Governments for a comprehensive system for un-interrupted inter-depot transfer of Ethanol within and outside the State. This may include annual excise permits to OMCs for movement of ethanol and other relevant and necessary measures.

(4) Further, in order to broad-base the scope of availability of ethanol, the Government has also decided on 10.12.2014 to allow procurement of ethanol produced from other non-food feedstock (besides molasses), like cellulosic and ligno-cellulosic materials including petrochemical route, subject to meeting the relevant BIS Standards."

1.25 The detailed analysis of EBP Shortfall and reasons thereof in various States as on 31.05.15 is given under:-

Sl. No.	Parameter	State	Quantity (in crore liters)
A	Prorated Ethanol Quantity	All States	33.4
B	Ethanol Receipt Quantity	All States	24.9
A-B	Shortfall		8.5
1	Non signing of Agreements by Suppliers	Maharashtra	2.0
2	Non renewal of Suppliers License	Tamil Nadu	1.2
3	Lower MS volumes - Non enhancement of blending license for OMC Depots	Karnataka	1.0
4	Delay in Renewal of OMC Depot licenses	All States except AP	1.0
5	Pending cases for capacity Enhancement of OMC Depot licenses	All States except UP	1.0
6	Issues related to limited time period of Export license - UP	UP	0.5
7	Delay at Suppliers front	All States except UP	1.8
1-7	Total Shortfall		8.5

Issues in procurement of Ethanol

1.26 Asked as to whether any problems have been encountered in the inter-state movement of Ethanol and the remedial action taken in this regard, the Ministry informed as follows:-

"Ethanol is a regulated product in State Excise Laws.

In case of inter-state movement of Ethanol, the Receiving State Excise needs to grant Import NOC which is sent to Dispatching State Excise which grants Export NOC. The Export NOC is sent to Receiving State which grants Truck-wise Import Permits which are sent to Dispatching State Excise, which thereafter grants Truck-wise Export Permits. Ethanol movement starts thereafter.

Due to requirement of taking multiple permits, Ethanol inter-state movement gets substantially delayed."

1.27 When asked about the details of taxes levied on Ethanol at various stages and the problems faced by the Ministry/OMCs due to taxes on Ethanol, the Ministry submitted the following information:-

"Ethanol attracts 12.36% Central Excise. Additionally, State Govts. levy VAT (or CST for inter-state movement), Denaturation fee, Entry Tax/Octroi/LBT etc. In case of inter-state movement, the Dispatching State levies Export fee and Receiving State levies Import Fee. The extent of State Govt./ Municipal taxes on Ethanol vary from State to State."

1.28 The supplies of ethanol are affected in many States due to various issues which are listed below:-

"SUPPLIERS:

- M/s. Uttam Sugars has started supplies to Mathura from December 13 onwards. However, other locations are yet to be started.
- M/s. Bajaj Hindustan Ltd are extremely erratic in supplying ethanol.
- In Tamil Nadu M/s. Amravati co-op sugars Production - 30 kl/day.
- M/s. Dharni Sugars is not supplying at Madurai/Tirunelveli due to breakdown.

STATES:

- Quarterly Permission required by Excise Dept., UP for Haryana, Punjab instead of earlier procedure of Yearly Permission.
- Delay in finalisation of 10% Blending for Euro IV MS from BIS.
- Karnataka State Excise is not increasing DL3 Licence Quantity for Gulberga & Bijapore Depots to start 10% ethanol blending."

1.29 In a note furnished to the Committee, the Indian Sugar mills Association has submitted that as per law of the country, the excise permits are to be obtained by the buyers i.e. in this case, the OMCs. However, the responsibility to obtain excise permission in case of ethanol supplies has been put on the sugar industry/suppliers. Sometimes the permission gets delayed due to some specific procedures to be followed at the level of State Excise departments. Mostly it happens in the case of inter-state movement of ethanol where two or more States are involved and therefore, NOC from the importing State is required by the exporting State as well as the State falling en-route, if any. Issuance of NOC and its subsequent verifications takes a lot of time, sometimes even about two months. This situation is always beyond the control of the sugar mills/ethanol suppliers. But ignoring the fact that the onus to get the requisite permission is on the buyers i.e. the OMCs in this case and the suppliers are only following it up as a gesture of goodwill, the OMCs impose penalties on the suppliers for non-compliance of indents. This is discouraging the sugar mills in participating in the programme wholeheartedly.

1.30 However, the Secretary, MoPNG during the course of oral evidence had informed that OMCs will endeavour to sign MoUs with State Governments to facilitate the intra and inter-State movement of ethanol.

1.31 During the course of oral evidence, DG, Indian Sugar Mills Association also submitted following information:-

“As mentioned by the Oil Companies also, there are several problems faced in the inter-state supplies. I have a small suggestion which we have placed before the Chief Secretaries of Uttar Pradesh and Maharashtra. When we move our ethanol between States, say from Uttar Pradesh to Haryana or from Maharashtra to Madhya Pradesh or elsewhere, there are clearances required from both the States. First, we go physically and get a No Objection Certificate from the importing State, bring it physically and submit it to the Excise Department of the exporting State. They then take that and send it back to the NOC issuing State to confirm in writing whether they have issued this NOC. All the States do this and it takes anywhere between a month to two and half a month. Therefore we have requested; can we not do this online instead of physically moving these papers? This is our request.”

1.32 In this context, he further added as follows:

".....the next thing is very important which I wanted to place before you. Despite the fact that denatured ethanol is a subject of the Union List, several State Governments continue to impose duties and taxes on that. For example, if we have to move ethanol from Uttar Pradesh to Delhi, Uttar Pradesh charges Rs. 1.00 as export fee and Delhi charges Rs. 2.00 as import fee. So, there is net loss to the supplier by Rs. 3.00. Suppose we do the same thing from Maharashtra to Gujarat, Maharashtra imposes Rs 1.50 as export fee and Gujarat imposes Rs 3.00 as import fee. The total net loss in this case is Rs 4.50. Similarly, there is some VAT imposed in some States like Karnataka, Tamil Nadu etc. which amount from Rs 2.20 to Rs 3.20. This is a problem we are facing.....

As I submitted before you, there is a clear demarcation of powers between the Union and the State List and this has also been upheld by the Supreme Court. I had submitted before you in the month of January that we would take it up with the Supreme Court. We took an advice from the lawyer and the lawyer said that since there is some case related to entry tax in the States pending with an eleven-Judge Bench in the Supreme Court, the easier way is that it may get clubbed with that. So, their advice is, if the Union Government notifies the denatured ethanol under Section 18G of the Industrial Development and Regulation Act, 1951, it will make the State taxes and duties untenable. We have taken up this matter with the Department of Industrial Policy and Promotion.

Sir, we have also written to the Ministry of Food. So, if an advice goes from the hon. Committee, it will happen. It is at an advanced stage and if it happens, we can actually fight with the State Governments and ensure that illegal, if I may call so, illegal taxes and duties are not imposed."

1.33 In this connection, he further submitted as under:

".....I am summarizing my submissions before you. The request that the assistance we require from the Union Government is: (i) Revise the ethanol price as per the increase FRP for sugarcane for 2015-16 sugar season as well as provide for a per kilometre rate beyond 450 kilometres; (ii) please notify the denatured ethanol under the IDR Act, 1951 through the Department of Industrial Policy and Promotion; (iii) kindly allow CENVAT credit on molasses used to produce ethanol. This will give us total of Rs 5.00 benefit which is the intention of the Cabinet decision and, (iv) reduce the EIA clearance period or remove the need for it for our distilleries.

From the State Governments, the assistance we require is; remove all taxes and duties from fuel ethanol and obtain and give the NOCs and confirmations for inter-State movement online. So, this is all we had to submit."

1.34 The Committee were informed that export permits are issued for one month only, which leads to wastage of time in obtaining these permissions frequently. Asked as to

whether the matter of issuing export permits for longer periods has been taken up with the State Governments, the Ministry in this regard submitted that:

“The issue of limited period of one month export permit has been taken up with the concerned State Government Officials. Secretary, MoPNG had a meeting with Chief Secretary, Government of Uttar Pradesh on 12.3.2015 and Minister of State (I/C), Petroleum & Natural Gas has also written a letter to the Chief Minister, Uttar Pradesh on 25.6.2015 in this regard. Similar meetings have taken place in Maharashtra wherein Director (S&P, CC) met Principal Secretary, Govt. of Maharashtra on 20.02.2015.”

1.35 While observing that NOCs are being issued and submitted for verification manually through posts or other means by sugar mill concerned causing avoidable delay in transit and asked as to whether the State Governments have been pursued for introduction of more speedy system for issuance and verification of NOCs/excise permit, the Ministry submitted as under:-

“During interactions, OMCs have indicated to State authorities about the practices being followed by few States like issuance of storage license for five years, online issuance of permits etc.”

1.36 The Committee observed that the MoPNG had meetings with the Chief Secretaries of the States of Maharashtra and Uttar Pradesh to take suitable steps for expediting MoUs with the Public Sector Undertakings. Asked as to what is the status in other States including states of Andhra Pradesh, Punjab, Karnataka, Rajasthan & Uttarakhand etc., the Ministry replied as under:-

"The Government on 10.12.2014 has, inter-alia, decided that OMCs will sign MoU with the State Governments for un-interrupted inter depot transfer of ethanol within and outside the state. Pursuant to this decision, Ministry of Petroleum and Natural Gas requested State Governments of Andhra Pradesh, Uttar Pradesh, Karnataka, Haryana, Rajasthan, Delhi, Punjab, Uttarakhand and Maharashtra on 12.2.2015 for taking suitable steps for expediting MoUs with Public Sector Oil Marketing Companies (OMCs). OMCs had meetings with aforesaid State Governments for resolving issues with State Excise Departments in relation to increase in ethanol quota, early renewal of storage license, expeditious granting of various permissions etc. Nodal Officers of OMC's and their team members are being directed to follow up with the respective States to bring in general consensus on the issue."

1.37 In a note furnished to the Committee, Indian Sugar Mills Association has informed that Liquor fit for human consumption only has been mentioned in the State

List, therefore, rest of the alcohols viz. industrial alcohol and fuel grade ethanol shall fall under Union List, thereby providing control of these two types of alcohols to the Union Government. However, it is seen that the State Governments are levying taxes/duties on fuel grade ethanol and industrial alcohol. The Ministry in this regard informed that the matter is being examined.

1.38 During the course of evidence, the representative of Shree Renuka Sugar Mills while deposing on the perspective of Sugar Mills in EBP informed the Committee that a major problem being faced by the sugar mills is that out of the total available quantities with the Sugar mills, the OMCs accept only the required quantity at one particular depot and return the remaining quantity saying that the depot does not have capacity more than this. However, if the OMCs wish, the remaining quantity can be sent to the adjoining depots but this is not the case in actual.

1.39 The Committee observed that some of the States were not getting any Ethanol supply. In this regard, DG, ISMA submitted following information:-

“Most of the sugar mills, as was pointed out, are concentrated in four or five States, like Maharashtra, Uttar Pradesh, and Karnataka. If we have to move towards, say to Rajasthan, to Madhya Pradesh, to West Bengal or to Bihar or further on, the distance becomes almost 1,000 kms. whereas the Government is compensating for almost about 450 kms. only. That is why our submission was that beyond 450 kms. if per kilometre rate is also ensured, then we will move to longer distance.”

1.40 The Committee were further informed that the meetings held among the Sugar Mills Associations, OMCs and the Government officials of Maharashtra, UP and Karnataka with regard to resolving issues related to state taxes/levies have not produced desired results despite the facts that fuel ethanol is a subject under union list. The Committee wanted to know as to what steps have been proposed by MoPNG for pursuing with various States Governments, the Ministry submitted that:

“The Government on 10.12.2014 has, inter-alia, decided that OMCs will sign MoU with the State Governments for un-interrupted inter depot transfer of ethanol within and outside the state. Pursuant to this decision, Ministry of Petroleum and Natural Gas requested State Governments of Andhra Pradesh, Uttar Pradesh, Karnataka, Haryana, Rajasthan, Delhi, Punjab, Uttarakhand and Maharashtra on 12.2.2015 for taking suitable steps for expediting MoUs with OMCs. OMCs had meetings with aforesaid State Governments for resolving

issues in relation to increase in ethanol quota, early renewal of storage license, expeditious granting of various permissions etc. Secretary, MoPNG had a meeting with Chief Secretary, Uttar Pradesh on 12.03.2015 and Minister of State (I/C), Petroleum & Natural Gas has also written a letter to the Chief Minister, Uttar Pradesh on 25.6.2015. Also, Director (S&P, CC) met Principal Secretary, Govt. of Maharashtra on 20.02.2015.

Now, Nodal officers have been advised to continue follow-up action with the State Governments. Besides, further visit of senior officers of MOP&NG is also being planned to the concerned States."

1.41 The Ministry has also submitted that following positive results have been obtained in some of the States:-

- "• Enhanced quota from 5% to 10% in Maharashtra at OMC Depots eg. Pune, Manmad, Nagpur;
- Reduction of delays in renewal of license in Andhra-Pradesh, Telangana, Haryana;
- Delhi, Goa State following on line system of issuing Import (Transport) permit thereby expediting the process."

SOLUTIONS TO THE CONSTRAINTS IN EBP PROGRAMME

1.42 During the course of oral evidence, the Ministry was apprised about the various issues faced in different States and possible solutions offered as under:-

"Uttar Pradesh

Issues:

- Validity of export permits only for 30 days.
- Process of reconfirmation of NOC provided by the Importing State.
- Possible Solution
- Validity to export be increased preferably up to one year/at least 90 days in line with the import permits.
- Develop Online system for reconfirmation of grant of NOC by the Importing State.
- Action Taken
- Periodic meetings with the State Government are held to resolve the issue.
- Current Status

- Export permits continue to be issued for 30days only.
- Levy of Re.1/- per litre as export fee & 0.15paise per litre denaturant fee.

Maharashtra

Issues:

- Enhancement of Excise permitted ethanol blending quantities at OMC Depots being referred to Commissioner State Excise.
- Delay in Renewal of storage license.
- Possible Solution
- Enhancement of quota at District Superintendent level.
- Prompt renewal of storage license.
- Action Taken
- Director (M), BPCL held meeting held with Principal Secretary cooperation in February, 2015 and follow up meetings with Sr. Officials of Govt. of Maharashtra.
- Current Status
- Ethanol quota increased for 10% blending after constant follow-up at Commissioner level.

Karnataka

Issues:

- As on date the Excise permitted Ethanol blending quantities can cater to only 51% of the MS sales of the State. Permission to enhance the licensed quantities to cover the total MS volumes of the State is pending.
- Delay in Renewal of storage license.
- Additional layer in the form of KSBCL.
- Possible Solution
- Storage licence to be enhanced on priority to commensurate with the requirement for 10% blending of ethanol.
- Action Taken
- Dir (M) HPCL had a meeting with Chief Secretary on 25.2.2015 and follow-up meetings are also held for solutions but no encouraging results.
- Current Status

- Ethanol blending is stopped in some locations of OMCs due to non renewal of license, which may also create dispute between vendors and OMCs.

Tamil Nadu

Issues:

- Vendors in Tamil Nadu are not able to supply ethanol since their licenses are not renewed by State Excise Department Since April 2014.
- Government of Tamil Nadu has not allotted molasses to the vendors for ethanol production for EBP programme.
- Possible Solution
- Speedy renewal of storage licenses.
- Permission for import of ethanol ex Karnataka may be allowed.
- Action Taken
- 1st Meeting of the Secretary Home, Government of Tamilnadu was held on 7.4.2015.
- Regular meeting with State Government Officials.
- Current Status
- Nil ethanol quantity received by OMC Depots for blending in the current sugar year 2014-15."

Demand and supply of Ethanol

1.43 Asked to furnish the statistics of sugarcane production and the demand of sugarcane in the country for the last five years, the Ministry submitted following information:-

"The year-wise production and demand of sugarcane in India for last five years, as provided by ISMA, is as following :

Particulars	2013-14	2012-13	2011-12	2010-11	2009-10
Production of	3456	3545	3538	3424	2923

Sugarcane (LacTon)					
Demand of Sugarcane (%age)					
Production of White Sugar	68.1	73.4	71.2	70	63.5
Seed Feed & Chewing etc.	11.2	11.3	12	11.9	11.9
Gur & Khandsari	20.7	15.3	16.8	18.1	24.6"

1.44 In a note submitted to the Committee, the Ethanol Manufactures Association of India has informed that the Oil Companies are facing acute shortage of ethanol in the States of Madhya Pradesh, Chhattisgarh, Andhra Pradesh and Gujarat etc. However, the cooperative/standalone units in Maharashtra are in a position to supply ethanol within short period to these states. As per Ethanol Manufactures Association of India, the country has a total of approximately 400 crore litres capacity of alcohol and out of that, Maharashtra itself is contributing 132 crore litres capacity of alcohol. To implement National Ethanol Blending program (EBP) by adding 5% and few states adding 10% ethanol into petrol, the requirement of country is 152.00 crore liters of ethanol. In future, the percentage of ethanol is increased from 5 to 10 percent in EBPO to all over country, then the indigenous production capacity is more than sufficient to fulfill the required quantity.

1.45 In this regard, the facts and figures about production capacity are as under:-

Sl. No.	State	Present production capacity in KL
1.	Maharashtra	983400
2.	Uttar Pradesh	699900
3.	Gujarat	101100
4.	Andhra Pradesh	166500
5.	Karnataka	300000
6.	Tamil Nadu	96000
7.	Bihar	74250
8.	Punjab	12000
	Total	2433150

1.46 Maharashtra State is having more capacity to supply ethanol, but it requires proper outlet to consume that quantity. As per capacity from Oil companies, presently, only 35 to 40% of total capacity is utilized. Otherwise the investment made by

Manufactures will remain idle and ultimately the cost of production will go up due to under capacity utilization of the unit. As per the tender document, the oil companies invited “ethanol from indigenous biomass, sugarcane & molasses” and they mentioned documentary evidence for sustainable supply of molasses. The said conditions, the 25 standalone units (Maharashtra) cannot fulfill because they are producing ethanol from rectified spirit or special denatured spirit as a raw material which is produced from indigenous molasses. If the standalone units cannot participate in the tender process, then the investment, manpower, and machinery will lie idle and there is only way which leads to closure of the unit. Already due to this situation, 26 standalone units of capacity 272100 KLPA are closed.

1.47 Asked as to whether the Ministry has considered constituting State level/Regional level mechanism for coordination among OMCs, Sugar Mills and other stakeholders for effective implementation of EBP Programme, the following reply was furnished by the Ministry:-

“The Government on 10.12.2014 has, inter-alia, decided that OMCs will sign MoU with the State Governments for a comprehensive system for uninterrupted inter-depot transfer of ethanol within and outside the state. This may include annual excise permits to OMCs for movement of Ethanol both within and outside the State and other relevant and necessary measures.

In order to expedite this MoU process, Nodal Officers from OMCs have been appointed for different States for coordination among OMCs, Sugar Mills and other stakeholders for effective implementation of EBP programme. The list of the Nodal officers is as follows:

Name of OMC	Responsible Officer	State
BPCL	Director (Marketing)	Maharashtra
HPCL	Director (Marketing)	Andhra Pradesh, Telangana, Haryana, Karnataka
IOCL	Director (Marketing)	Uttar Pradesh, Delhi, Punjab, Rajasthan"

1.48 The yield of ethanol is different when manufactured from sugarcane juice and molasses. One Ton of sugarcane juice will yield 70 liters of ethanol. One Ton of molasses will yield 220 liters of ethanol. CCEA in its meeting held on 3rd July, 2013 had

inter alia decided that sugarcane or sugarcane juice may not be used for production of ethanol and it be produced only from molasses. Further, the Government has also decided on 10.12.2014 to allow procurement of ethanol produced from other non-food feed-stocks (besides molasses), like cellulosic and ligno-cellulosic materials including petrochemical route, subject to meeting the relevant BIS Standards. (Reply 4). Asked if the Ethanol is manufactured directly from the Sugarcane Juice, what will be the impact of this move, CMD, BPCL, during the course of oral evidence, submitted following information:-

"Food and Civil Supplies Ministry has a slightly different view on the subject because whenever we have discussed it with them they are of the view that it will affect the food production in the country."

1.49 State-wise details of sugar and distillery facilities in India (as provided by ISMA) along with their capacities are given at Annexure-I.

1.50 The representative of Indian Sugar Mills Association during the course of oral evidence had stated that the Ethanol Blending Programme can also ensure conversion of surplus sugarcane into ethanol instead of producing surplus sugar. This will directly improve cash flow of sugar mills which in turn, will help in timely payment of remunerative cane price to the farmers. It is important to ensure a long term clear policy so that the suppliers also know the market situation in advance.

1.51 As per Indian Sugar Mills Association (ISMA), a statement showing State-wise production of ethanol for the last three years is given at Annexure –II.

1.52 Asked as to whether any priority has been fixed by the government for supply of ethanol to various sectors based on the genuine demands for distribution of ethanol to these sectors, the Ministry informed that no quota/priority has been fixed/finalized for Ethanol allocation to various sectors.

1.53 Asked to furnish the details of the quantities of ethanol supplied to various sectors by sugar industry and the prices at which it is supplied during the last five years, the Ministry informed as under:-

"Department of Food and Public Distribution (DFPD) has informed that ethanol is also used by Chemical Industry besides potable purposes or blending in petrol. DFPD does not maintain information regarding consumption of alcohol by different sectors.

1.54 The representative of the ISMA, in this context, during the course of oral evidence also submitted the following information:-

"There are three sectors which demand alcohol from the sugar industry. One is potable alcohol sector. I can give the numbers also. The potable alcohol sector requires almost about 150 crore litres. About 50 crore litres comes from grain-base. So, they are looking at about 100 crore litres from the sugar industry. As far as the blending programme is concerned, if we talk about five per cent blending, we require almost about 115 crore litres. So, that takes us to about 215 crore litres. Every year we have a capacity to produce not less than 260 to 270 crore litres. There is still about 60-70 crore litres left in the country for the chemical industry. Now, unfortunately we have been requesting the chemical industry to enter into with us into long-term agreements. But they are always relying on imports. Today, Sir, they are importing 20 crore litres and for the next two years they have finalised their contracts. Both years 20 – 20 crore litres they are going to import. Whenever the crude oil price comes down even though we have a surplus they keep on importing. So, they are not reliable customers to us. That is why we have not relied on them. We are interested in the bio fuel programme of the country.

Ethanol blending with diesel is possible only if we add the additive. It can be done. That is what Karnataka buses are doing."

Production of Ethanol from other sources

1.55 Asked about the prospects of ethanol production from sources other than sugarcane and as to whether any cost benefit study has been done by the Government in regard to production of ethanol from various sources, the Ministry informed as under:-

"The Ministry of New and Renewable Energy (MNRE) has informed that as per the National Policy on Bio-fuels, ethanol for use as bio-fuels can be produced from various agricultural wastes and residues besides sugarcane molasses. However, technologies for this purpose are still at research and development stage and no full scale projects have been set up in the country. No cost benefit study so far has been done by the Ministry of New and Renewable Energy on production of ethanol from various sources."

1.56 Asked as to whether any study has been done in states where sugarcane is not a primary crop but the environment is conducive for the development of other crops that can lead to production of ethanol and the action initiated for promoting the cultivation of

such crops in these states, the Ministry of PNG informed that the Ministry of Science & Technology and the Ministry of New and Renewable Energy are supporting research and development on production of ethanol from lingo-cellulosic biomass including other crops such as sweet sorghum.

1.57 The representative of Indian Sugar Mills Association during the course of oral evidence informed that the demand from the oil companies is limited to ten per cent or 156 crore liters. Therefore, we will not be able to converge too much of sugar into it. Around one billion liters or 100 crore liters means, we will have to convert about 1.5 or 15 lakh tones of sugar. It is not a very big number as compared to total production. It is not a major concern. What we can actually recommend is that whenever we have surplus sugar we do not know what to do with it because international market is out of our reach, if this can be used as a kind of controlling surplus sugar as well as meeting the needs of the OMCs, it would be better.

Pricing mechanism for Ethanol

1.58 The Committee enquired as to what factors are taken into consideration while calculating the benchmark price of ethanol. In this regard, the Ministry replied as given under :-

"OMCs considered trend in MS price for previous 12 months period, Blending Cost and lower Calorific Value of Ethanol while fixing Ethanol Benchmark Price.

The CCEA in its meeting held on 10.12.2014 has, inter-alia, decided to fix the delivered price of ethanol in the range of Rs.48.50 per liter to 49.50 per liter, depending upon the distance of distillery from the depot/installation of the OMCs, inclusive of all central and statutory levies, transportation cost etc, which would be borne by the Ethanol suppliers."

1.59 Asked as to whether any study was conducted regarding the viability of EBP Programme if the Ethanol is procured at the prevailing market price which is being offered by the other sectors for procurement of ethanol, the Ministry submitted following information:-

"The CCEA in its meeting held on 10.12.2014 has, inter-alia, decided to fix the delivered price of ethanol in the range of Rs.48.50 per liter to 49.50 per liter, depending upon the distance of distillery from the depot/installation of the OMCs, inclusive of all central and statutory levies, transportation cost etc, which would be borne by the Ethanol suppliers.

Details are not available with this Ministry regarding market price offered by Ethanol suppliers to other sectors."

1.60 Asked as to whether any negotiations have been held with the Indian Sugar Mills Owners Association while arriving at the prices of ethanol, the Ministry in a written reply submitted following information:-

"After the Government has fixed procurement price of ethanol as per CCEA decision of 10.12.2014, OMCs are having consultations with sugar industry on procurement procedures, terms and conditions and other related issues."

1.61 Cost Elements for Benchmark pricing of Ethanol are as following :- (ppt. 9)

- "● Average Refinery Transfer price of Petrol for FY 2013-14 and Transportation Cost from Refinery to OMCs depots.
- Central Excise Duty on Petrol.
- Ethanol Blending Cost (reduced from delivered cost of Petrol at OMCs depots).
- Adjustment for Calorific Value @ 5.975% (reduced from Delivered Cost of Petrol at OMCs depots)."

1.62 On being asked as to whether the Sugar Mills find it viable to supply Ethanol at the current prices, the representative of ISMA during the course of oral evidence submitted the following information:-

"The recent decision of the Government to remove excise duty from ethanol is a step in that direction. If we are going to sacrifice sugar and make ethanol instead, the industry will obviously want a commercially neutral situation. So, we calculated and we found that around Rs. 45 or Rs. 46 per litre of ethanol if it is given to the distilleries or the sugarcane industry, then it makes it commercially neutral for them to produce sugar or ethanol. Therefore, the government agreed to remove the excise duty on ethanol to pass on that Rs. 5 because currently the price of Rs. 48 or Rs. 50 minus duties, taxes and transportation works out anywhere between Rs. 40 and Rs. 41 depending on the distance. So, another Rs. 5 would mean that from next year or a couple of years henceforth a lot of sugar mills will either set up capacities to divert the surplus sugarcane."

1.63 In this regard, he further submitted:-

"We are not getting Rs. 45. and Rs. 41 is not enough. The simple calculation is that if my cost of production of sugar is almost Rs. 30 to Rs. 31, if I sacrifice one kilo sugar I get 0.6 litre of ethanol. So, the price structure should be that ethanol price should be one and a half times the price of sugar to make it commercially neutral for us."

1.63 Elaborating more over the pricing issue, it was further informed by the representative of ISMA that:-

"if I take last year's average it should be in the range of, depending on the State, Rs. 39 to Rs. 40 per litre at my mill gate. Some variations might be there at some seasons, it might come down to Rs. 38 but one important thing is that this is 94.5 per cent pure alcohol which we sell to the potable sector and what we give ethanol for the blending purpose is 99.6 per cent pure. So, it is a 5 per cent volume loss also which we need to get compensated by a slightly higher price."

1.64 Asked about the details of the mechanism for determination of the price of final product i.e. Ethanol Blended Petrol, the Ministry informed that the final price of ethanol blended Petrol is same as the Retail Selling Price (RSP) of Petrol at the Retail outlets.

1.65 The Committee enquired as to whether OMCs have been charging any blending cost for EBP, the Ministry informed that

"OMCs have not been charging blending cost for customers at retail outlet level but OMCs were considering blending cost at the time of fixing Ethanol Benchmark Rates. Now ethanol procurement prices have been fixed by Government as per CCEA decision of 10.12.2014."

1.66 Asked as to whether the OMCs have purchased any quantity of Ethanol since inception and whether they have started selling Ethanol Blended Petrol in some States and the price being charged by OMCs for this EBP, the Ministry submitted following information:-

"Since inception, as per Government directions from time to time, OMCs have been purchasing Ethanol for EBP Programme. OMCs have been selling EBP in States wherever they have been able to finalize and procure Ethanol as per Tenders/EOIs floated by them. There is no price difference between Ethanol blended petrol and non EBP at Retail Outlets."

1.67 On a further query regarding the blending cost at present and as to whether the blending cost has been revised during the last 3 years, the Ministry informed that OMCs have informed that the current Blending Cost is Rs. 3.23 per Litre. The Blending Cost was earlier Rs. 2.07/Litre.

1.68 It is observed that there are only two slabs for the rates based on the distance of transportation and beyond 100 KMs, there is only one slab for differential distances. Asked as to whether the Ministry/OMCs have any plans to review the current

transportation cost for longer distances, the Ministry in a written reply submitted following information:-

"The Government on 10 December, 2014 has fixed the delivered price of ethanol in the range of Rs.48.50 per litre to 49.50 per litre, depending upon the distance of distillery from the depot/installation of the OMCs, as per the slab given below:

Distance of distillery in Km.	Rs. per Litre
0-100	48.50
100-300	49.00
> 300	49.50

(2) The above rates are inclusive of all central and statutory levies, transportation cost etc, which would be borne by the ethanol suppliers.

(3) Normally, ethanol is not being transported for longer distances. However, Rs1/- per litre has been additionally given to the supplier on account of increased transportation cost in case he has to transport the ethanol for longer distance beyond 300km.

(4) The issue of price revision to take care of longer distance, the issue may be looked into after the discussion of OMCs with the sugar industries. The Chairman/CMDs of OMCs are being requested to have a dialogue with the sugar industry and then arrive at a solution."

1.69 The Committee were informed that in view of high cost of imported ethanol, CCEA has disallowed to import ethanol for EBP Programme. The Committee enquired as to whether the Ministry has done any analysis regarding the benefits against the high cost of import to apprise CCEA, the Ministry informed as given under:-

"In view of the high prices offered by the vendors against the global tenders floated by OMCs for procurement of ethanol, the proposal for import of ethanol was dropped. It was not found feasible to procure ethanol at much higher price than the Petrol price, since blending of such ethanol in Petrol will further raise the price of ethanol blended Petrol."

1.70 The Committee enquired as to whether any benefit or subsidy is being offered to sugarcane farmers and ethanol producers in order to promote ethanol production for early implementation of Ethanol Blended Petrol Programme, the Ministry in a written reply submitted following information:-

"Government has created Sugar Development Fund for financing of activities for development of sugar industry and for matters connected therewith or incidental

thereto. The SDF can inter-alia be utilized for loaning to sugar undertakings for production of anhydrous alcohol or ethanol."

Storage Infrastructure for Ethanol

1.71 In a note furnished to the Committee, ISMA has informed that at some of the depots, adequate storage facility for Ethanol is not available and the tankers dispatched by the suppliers of Ethanol are compelled to wait for a long period putting the suppliers to call for demurrages putting extra burden on them.

Further, the Ethanol Manufacturers Association of India has also informed that insufficient ethanol storage capacity is one of the major problems which affects the lifting of ethanol as per schedule and unloading of tankers. In addition, Chairperson of Sugar Mill during the course of oral evidence informed as under:

"Each depot has some requirement but the offers to that depot come more than what is their requirement. So, for the surplus that remains, the supplier should be called and that quantity should be offered to the other depot where there is a deficit; for example, for our Desur depot, if the requirement is of 10 crore litres, the nearby distilleries offer 15 crore litres. Then, the quantity of 5 crore litre is rejected. So, the OMCs amongst themselves should regulate this and they should call the supplier and ask him whether he is ready to supply to other depot".

1.72 Asked as to whether the OMCs have adequate number of dedicated storage tanks to receive and store ethanol, the Ministry informed as under :-

"OMCs have developed Ethanol Storage at their Depots & Terminals in States & UTs notified for EBP implementation."

1.73 In this regard, the representative of BPCL during the course of oral evidence submitted following information :-

"the storage capacity generally is taking care of the current off take. So, obviously, when the off take is going to be much higher there will be a need to augment some of the storages at the locations. Director Marketing has spoken to some of the locations. So, augmenting the tankage at the location to take care of the monthly requirement is something which we will be able to do. I do not think it is going to come in the way of our process. I do not what local approvals are required. That is the process which we need to do but subject to the local approvals I think augmenting the tankage to take care of the supply side – I am not sure whether 21 days or 30 days requirement should be sufficient but clearly three to four days may not be the right perspective of having a storage when the blending is going to be on a continuous basis. Especially, if it is five per cent and

ten per cent at different locations, we need to look at the consumption pattern and accordingly augment the storage. From our side certainly we will work towards this."

1.74 Supplementing, representative of another OMC submitted following information during the course of oral evidence:-

"all the oil companies which deposed today, oil companies have storage for 15-35 days. However, there are few locations where we need to augment the storage capacity. We have already identified those locations."

Impact of use of EBP on Automobiles

1.75 When asked about the details of the efforts required at the level of Retail outlets and Automobile Manufacturers for successful implementation of the EBP programme, the Ministry submitted following information:-

"Retail Outlets can undertake campaigning assuring motorists that Ethanol blends are in overall interest of economy and environment. Automobile manufacturers can undertake research for Flexi-fuel vehicles ie those which can undertake higher % of Ethanol."

1.76 Asked as to whether any changes are required in design of engines for use of various blends of ethanol with petrol, the Ministry submitted as under :-

"As per the report of the collaborative studies undertaken by IOC R&D, the society of Indian Automobile Manufacturers and the Automotive Research Association of India, no change is required in the design of engines for the use of 5% /10% ethanol blend in gasoline except for some components made up of neoprene rubber."

1.77 When asked as to any experiment has been done for development of engines using Ethanol entirely, the representative of the MoPNG during the course of oral evidence submitted following information:-

"Some of the countries which have large Ethanol production as compared to our country, for example as you have mentioned Brazil, there they have developed flexi fuel engines which can run on different blending of Ethanol. Some countries are doing it. In Europe it is right now five per cent. So, it also depends a lot on the availability of Ethanol as an economical fuel."

1.78 When enquired as to whether the ethanol blended petrol is compatible with materials of the automobile engines, the Ministry submitted that

"BPCL has informed that Ethanol blended Petrol is compatible with the current generation of automobile engines. Corrosion Inhibitor is added to Ethanol to avoid corrosion of storage tanks at OMC Depots as well as for automobiles."

1.79 In addition to the above information, CMD, IOCL during the course of oral evidence also submitted following information:-

"The studies have been done on it. There are certain rubber components in particular category of vehicles which were alone getting impacted, which were actually old vehicles. But, otherwise, a research was done through ARAI. It established that there is no impact on the vehicle. In the limited trials wherever it was done 10 per cent, it was proven that 10 per cent blending of ethanol can be taken. "

1.80 It is seen that the countries like Brazil and European countries are running flexi fuel engines which can run on different percentage of blending of Ethanol. Asked as to whether the Ministry/OMCs are taking up the matter of flexi-fuel vehicles with the concerned stakeholders, the Ministry submitted following information:

"Information is being obtained from Department of Heavy Industry and Ministry of Road Transport and Highways. So far as MoPNG is concerned, a notification has been issued on 2.1.2013 directing the Oil Marketing Companies (OMCs) to sell Ethanol blended Petrol with percentage of ethanol upto ten per cent as per the Bureau of Indian Standard (BIS) specification to achieve five per cent ethanol blending across the Country as a whole."

1.81 The representative of ISMA, in this regard, during the course of oral evidence submitted following information:-

"Sir, in Brazil, when people go to a petrol pump, they have separate outlets for ethanol and separate outlets for petrol. In Brazil, 25 to 30 per cent petrol is ethanol blended petrol. The consumer has to decide whether he wants 40 per cent ethanol and 60 per cent petrol or 100 per cent ethanol because they are running flexi-fuel cars. We need to get flexi-fuel cars in the country to do that."

1.82 In addition, the representative of Shri Renuka Sugar Mills informed that Karnataka Transport Department and Renuka Sugar had run a programme of ten per cent mixing with diesel for KSRTC buses for two years. It was very successful. It was economical for them.

1.83 On enquiring as to whether any awareness campaign has been launched by the Ministry for promoting the use of ethanol blended petrol, the Ministry submitted following information :-

"OMCs have displayed banners/posters in selected locations for customer awareness with reference to introduction of EBP."

1.84 Asked as to whether any benefit or subsidy is being offered to sugarcane farmers and ethanol producers in order to promote ethanol production for early implementation of Ethanol Blended Petrol Programme, the Ministry submitted following information:-

"Government has created Sugar Development Fund for financing of activities for development of sugar industry and for matters connected therewith or incidental thereto. The SDF can inter-alia be utilized for loaning to sugar undertakings for production of anhydrous alcohol or ethanol."

1.85 Asked as to whether any awareness programme for farmers to encourage them to cultivate Bio-Fuels crops has been launched by the Ministry, the Ministry informed that as per Ministry of Agriculture, Department of Agriculture & Cooperation, presently, no such awareness programme has been launched.

Research and Development

1.86 Asked as to whether India is participating in any international cooperation programme for research and development in the field of bio-fuels i.e. ethanol and bio diesel, the Ministry submitted following reply :-

"Indian Oil Corporation Ltd. (R&D) Centre and Department of Bio-technology (DBT) has established Bio-Energy Research Centre (BERC) in the premises of IOC (R&D). Mandate of this centre is to carry out research in the area of bio-energy including 2nd and 3rd generation bio-fuels. This centre has set up a multi-purpose pre-treatment pilot plant of 0.25 tons/day for conversion of lingo-cellulosic bio-mass to ethanol. This plant has been designed and developed under collaborative agreement with National Renewable Energy Laboratory (NREL), Golden, Colorado, USA.

(2) BERC has entered into an MOA with Lanzatech, a top bio-technology company, to grow special type of microalgae on a broth containing acetate which is produced by fermentation of carbon dioxide, carbon monoxide etc. rich gases.

(3) IOC (R&D) is participating in a bio-energy programme between DST and Australian research institutes. The main idea of this programme is to exchange

best practices in the area of bio-energy to bring down the cost. A scientist exchange programme was set up with Lund University of Sweden, in the area of enzymes and pre-treatment to produce ethanol from agricultural wastes. IOC (R&D) has signed MoU with UOP, USA for the development, scale up & commercialization of suitable technologies for thermal degradation of biomass (pyrolysis) to bio-oils. IOC (R&D) is also participating in the national project with DST under International Science & Technology Partnership with Canada for indigenous development of technology for the production of Bio-jet Fuel from Jatropha oil."

Bio-Diesel

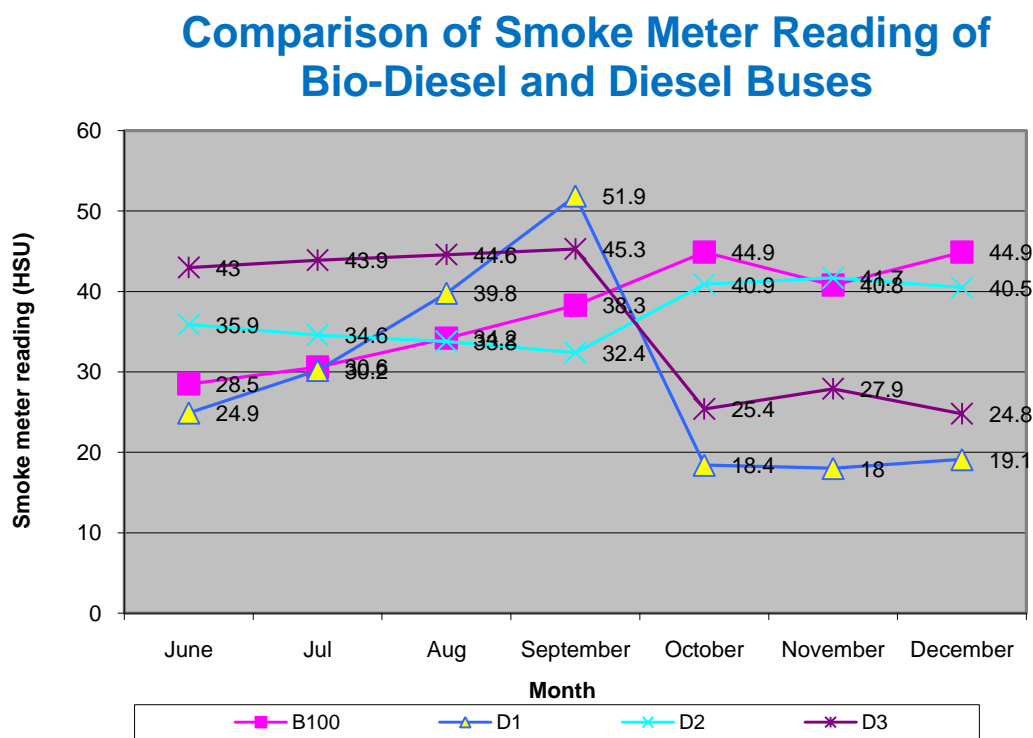
1.87 Bio-Diesel is derived from vegetable oils such as Soya bean, Jathropa, Corn, Sunflower, Cotton seed oil, Rice Bran Oil, Rubber Seed Oil etc. Bio-diesel being green and renewable fuel with high lubricity and low emissions has many advantages over other conventional fuels. Due to similar properties, it can be easily mixed with High Speed Diesel.

- Biodiesel manufacturers interested for supplying biodiesel to OMCs are to approach State Level Coordinator of oil companies.
- After assessment of the production capacity and credibility of the prospective supplier by joint evaluation/certification by Industry team, samples to be tested for prescribed BIS specifications, the supplier to be registered as authorized supplier.
- The purchase price of bio-diesel has been revised periodically and the current purchase price is Rs. 39/litre effective 14-15 May 2015 (inclusive of all taxes) for purchase of biodiesel (B100) at the collection centers.
- Working Group & Steering Committee has been constituted by MoP&NG to address the issue at various levels. In addition, BIO-FUEL cell has been also constituted by MoP&NG for effective implementation of biodiesel and ethanol blending program.
- MoP&NG has been directed OMCs to float Expression of Interest (EOI) to access the availability.

1.88 Asked to furnish a comparative statement for emissions from bio-diesel and from diesel (Petroleum Product), the Ministry submitted following information :-

"(i) According to a PCRA – CBDA (Chhattisgarh Bio-Diesel Development Authority), Raipur R&D Project, Irrigation pumps & tractors used to emit smoke and foul smell on use of petro-diesel. However, while operating on bio-diesel, exhaust from irrigation pumps and tractors was found to be smokeless and free

from foul smell. Comparative emission results obtained from another R&D Project carried out by PCRA in collaboration with CIRT, Pune, is shown below:-



The graph shows that smoke level of bio-diesel bus (B100) is lower compared to Diesel buses (D1, D2 & D3) initially, but becomes higher than diesel buses with the passage of time.

(ii) Comparative statement for emissions from bio-diesel blend and from diesel is as follows :

Emissions, gm/km	HSD	20% Bio-diesel blend	% age reduction *
Carbon Monoxide (CO)	0.178	0.141	-20.8
Particulate Matter (Pm)	0.065	0.053	-18.5

*Above results are based on the studies conducted on a fleet of 4 Passenger cars."

1.89 The Committee enquired about the present status of implementation of National Bio-diesel Policy. In this regard, the Ministry informed as under :-

"To encourage production of bio-diesel in the country, the Ministry of Petroleum and Natural Gas announced a Bio-diesel Purchase Policy, in October, 2005, which became effective from 1.1.2006. Under this scheme Oil Marketing Companies (OMCs) are to purchase Bio-diesel (B100), meeting the fuel quality standard prescribed by BIS for blending with High Speed Diesel (HSD) to the extent of 5% at identified purchase centres across the country. The Policy has

identified 20 purchase Centres of the public sector OMCs all over the country. The OMCs would purchase bio-diesel from those bio-diesel manufacturers who register with them after satisfying the technical specifications, at a specified delivered price.

Ministry of New and Renewable Energy, Government of India has promulgated the National Policy on Bio-fuels, in December, 2009. As per the policy, the responsibility of storage, distribution & marketing of Bio-fuels rests with OMCs. The minimum purchase price for bio-diesel will be determined by the National Biofuel Steering Committee (NBSC) and decided by National Bio-fuel Coordination Committee (NBCC) taking into account the entire value chain comprising production of oil seeds, extraction of bio-oil, its processing blending, distribution and marketing. The Minimum Purchase Price (MPP) for bio-diesel by the OMCs will be linked to the prevailing retail diesel price.

OMCs have reviewed the procurement price of bio-diesel at the various purchase centres accordingly and presently the declared price of Bio-diesel is Rs.41.00 per litre w.e.f. 07.11.2014."

1.90 Asked to furnish the details of various sources of bio-diesel along with their yields and the environmental conditions conducive for growth of bio-diesel, the Ministry informed as under :-

"Biodiesel can be made from virgin or used vegetable oils (both edible & non-edible) and animal fats through trans-esterification. Sunflower and rapeseed are the raw materials used in Europe whereas soyabean is used in USA. Thailand uses palm oil, Ireland uses frying oil and animal fats. The Indian approach to biodiesel, in particular, is somewhat different to the current international approaches which could lead to conflict with food security. It is based solely on non-food feedstocks such as non-edible oil seeds.

(2) At present, Indian Oil's experience is limited to Jatropha plantation only, under bio-diesel value chain. Jatropha fruiting starts after 2-3 years of plantation, however, mature and stable fruiting occurs in about 4-5 years after which seed yield may stabilize. Indian Oil's plantations were started in 2009-10. Hence, clear picture of seed yield will emerge during 2014-15 and thereafter. However, seed yield of Jatropha plantation is observed from 100 grams to 1.5 kgs per plant (gathered from pan India survey by Indian Oil and other market intelligence).

(3) Jatropha is a very hardy plant and grows in a wide variety of agro-climatic conditions from arid (200 mm of rainfall) to high rainfall areas and on lands with thin soil cover to good lands. Many of the strong proponents of the use of Jatropha for producing oil-based bio-fuel, claim a number of potential benefits which have been widely cited in various literature. These are:

- the oil produced is non-edible, which helps to avoid food versus- fuel tradeoffs;
- it has high oil content (40 per cent) and relatively low gestation period (2-3 years);

- it can survive in areas of low rainfall and low fertility;
- it requires less inputs and minimum care for cultivation;
- the cake obtained after oil extraction can be used as organic manure, for preparation of herbal insecticides and biogas;
- Jatropha has the ability to assist in the build-up of soil carbon;
- Jatropha is an animal deterrent crop and hence not browsed by grazing animals."

(Source: *The Report of Planning Commission on Development of Bio-fuels* (GoI, 2003), UNCTAD, 2006; ADB, 2011, NCAP policy paper 27, 2012 etc.)

1.91 When asked to furnish State-wise details of the land under cultivation for Jatropha Curcas and Pongamia Pinnata, the Ministry submitted following information :-

"As per BPCL, Bharat Renewable Energy Ltd. (BREL) is only working in UP and have been offered around 1,50,000 acres of waste land for Jatropha/Pongamia plantation.

IOCL has undertaken some Jatropha plantations in wasteland conditions; however Indian Oil doesn't have experience for commercial scale Pongamia plantation: State-wise details of the land under cultivation for Jatropha Curcas are as follows:

State	Plantation (hectares)	Remarks
Madhya Pradesh (Jhabua district)	~ 293	Plantation done on revenue wasteland provided by Government of MP on long term lease basis.
Chhattisgarh	~ 5889	Plantation done by IndianOil's JV Company (IndianOil-CREDA Biofuels Ltd - ICBL)
Uttar Pradesh	~1818	Plantation done by Panchayats through MNREGA funds under Jeevan Jyoti Yojana of UP Govt. Under this scheme, IndianOil has to facilitate and procure Jatropha seeds from Panchayats for bio-diesel production."

1.92 In this connection, BPCL has further informed that :

"Jatropha: Protection of crops, hedge for erosion control or as a windbreak, fuel wood, organic manure, and industrial raw material for soap, cosmetics etc.

Pongamia: Pongamia oil is being used as fuel for cooking and lamps, lubricant, water-paint binder, pesticide, and in soap making and tanning industries. The oil is known to have value in folk medicine for the treatment of rheumatism, as well as human and animal skin diseases. (source : market intelligence)

MNRE has informed that apart from biodiesel production, the oil produced from Jatropha and Pongamia seeds is used as fuel for cooking and lighting besides its use for soaps, paints, pesticide, tanning industries, etc. The de-oiled cake is used as bio-manure to enrich soil fertility. Besides, Pongamia is also used as a timber tree."

1.93 Asked as to whether the land under cultivation for Bio-diesel producing plants has expanded during the last five years, the Ministry submitted following information:-

"As per Ministry of Agriculture, Department of Agriculture & Cooperation, no plantation programme has been undertaken during the last five years for bio-diesel producing plants. Further, Ministry of Rural Development, Department of Land Resources has informed that they are not implementing any such programme for cultivation of Bio-diesel producing plants."

Production of Bio-Diesel

1.94 Asked to furnish the details regarding the number of bio-diesel production facilities operational in India and as to whether these units get sufficient feedstock to maintain full capacity utilization, the Ministry submitted following information:-

"Bio-diesel Association of India (BDAI) has informed that only a few units are able to operate since the desired feedstock is not available within the country. The main feedstock being used is Used Cooking Oils and residues from the vegetable oil refineries.

The oil seed production in the country is very scattered and not organized. Present collection is being done only by the tribal areas which does not come to the markets for utilization by the bio-diesel processing plants. Infrastructure on collection and crushing is needed in these remote areas to enable the present plants utilize these oil seeds effectively. "

Bio-diesel Program Background & Status

Figures in MMTPA

Parameter	Requirement
Projected HSD Consumption	70.00
Bio-diesel Quantity required for uniform 5% blending	3.50

Installed Capacity for Bio-Diesel Production in India	1.00
Investment till date by the Bio-diesel Industry in Rs Crore	1500.00
Current reported production of Bio-diesel	0.10
Biggest Single Consumer of HSD in India is Indian Railways	2.80
Bio-diesel Quantity required for Railways alone to achieve 5% blending across their RCD's	0.14

Most of the Bio-diesel production units are running on or below 25% of the designed/installed capacity owing to inconsistent supply of feed stocks

Procurement of Bio-Diesel

1.95 Asked as to whether the Ministry is able to receive continuous supply of bio-diesel for implementation of National Policy on Bio-Diesel and the prices at which the bio-diesel is being procured by the Government, the Ministry submitted following information :-

"As per Biodiesel Purchase Policy of 2005, those Bio-diesel manufacturers, who get their samples approved as per B100 Specs. from the Oil Companies and get registered as Authorized Suppliers; are eligible for assured purchase. Biodiesel manufacturers need to approach the SLC, who will assess the capacity and credibility through Joint Industry Team and also arrange for sample testing etc. Priority should be given to those Bio-Diesel producers who propose to use Non-Edible Tree Borne Oils as feedstock and undertake or commit to support farming of Oil Bearing Plants. The Bio-Diesel manufacturers will ensure Delivered Supply at Purchase Centres setup by OMCs. OMCs shall buy Bio-Diesel (B100), which meets the BIS Spec. at a uniform price inclusive of all taxes and duties. This Uniform Price will be changed once in six months. Currently, effective 7th September, 2014, the Purchase Price for Bio-Diesel is Rs. 41.00/ltr.

The bio-diesel manufacturers are yet to register & get their sample certified with the bio-diesel purchase centres for authorized supply of bio-diesel to OMCs. Hence OMCs have not procured any bio-diesel. "

1.96 When asked about the cost of production of bio-diesel from Jatropha, the Ministry informed that as per information given by BPCL, OMCs have so far not produced bio-diesel from Jatropha and hence they do not have information regarding cost of Bio-diesel production from Jatropha.

1.97 Asked as to what quantities of bio-diesel have been received at the 20 indentified purchase centers of the OMCs since inception, the Ministry informed as under :-

"As informed by OMCs, the bio-diesel manufacturers are yet to register & get their sample certified with the bio-diesel purchase centres for authorized supply of bio-diesel to OMCs. Hence OMCs have not been able to procure any bio-diesel for the blending in line with the Bio-diesel Purchase Policy."

1.98 As per Ministry's latest information the purchase price of the bio-diesel has been revised periodically and the current purchase price is Rs.41/litre effective from 07.11.2014 inclusive of taxes for purchase of bio-diesel at the collection centres.

1.99 When asked as to whether any special loans/grants facility is being extended to farmers in bio-diesel crops cultivation, the Ministry informed as follows:-

"Ministry of Petroleum and Natural Gas and Ministry of New and Renewable Energy are not providing any loans/grants to farmers for cultivation of bio-diesel crops."

As per Biodiesel purchase policy, the following 20 Bio-diesel purchase centres have been set up by OMCs:

Sl. No.	State	Purchase center	Oil co.
1	Andhra Pradesh	Ghatkesar	HPC
2	Chhattisgarh	Mandirhasaud	HPC
3	Delhi	Bijwasan	IOC
4	Gujarat	Kandla	BPC
5	Haryana	Rewari	IOC
6	Karnataka	Devanagunthi	IOC
7		Mangalore	IOC
8	Madhya Pradesh	Mangliagaon	IOC
9	Maharashtra	Manmad	BPC
10		Borkhedi	BPC
11		Loni	HPC
12		Vashi	HPC
13	Punjab	Bhatinda	IOC
14	Rajasthan	Sanganer	BPC
15		Salawas	HPC

16	Tamil Nadu	Korukkupet	IOC
17		Narimanam	IOC
18		Karur	BPC
19	Uttar Pradesh	Panki	IOC
20		Amousi	IOC

PART II

Recommendation No.1

Implementation of Ethanol Blended Petrol Programme

The Committee note that the Government of India decided to launch Ethanol Blended Petrol (EBP) programme in January, 2003 for sale of 5% ethanol blended petrol. The Ministry of Petroleum and Natural Gas vide its notification dated 20th September, 2006 directed the public sector OMCs to sell 5% Ethanol Blended Petrol subject to commercial viability as per BIS standards in the notified 20 States and 4 UTs of the country w.e.f. 1st November, 2006. Thereafter, the CCEA in its meeting held on 9th October, 2007 decided on 5% mandatory blending of ethanol with petrol and 10% optional blending w.e.f. October, 2007 and 10% mandatory blending from October, 2008.

The Committee note that despite the fact that CCEA had directed for mandatory blending of petrol with ethanol within a specified time frame, the programme was not implemented by the Ministry/OMCs until 2012 due to the various reasons including that of sugar mills not finding supply of ethanol remunerative at the offered prices of OMCs.

The Committee are of the view that with 5% Ethanol Blended Petrol and subsequently higher blending in future, the crude oil imports can come down saving significant amount of foreign exchange. Besides, studies have shown that use of Ethanol Blended Petrol leads to significant reduction of emissions into environment and can address the concerns of climate change and strengthen energy security. The Committee also observe that many countries in the world including USA and Brazil have successfully implemented bio-fuel programmes and feel that India being one of the largest producers of Sugar Cane in the world should also reap the benefits of this renewable bio-mass energy resource.

The Committee note that the Government has fixed the price of Ethanol in November, 2014 at Rs. 48.50/litre and the sugar mills have started to supply

Ethanol at this price due to which 2% blending levels have been achieved. The Committee appreciate the recent initiatives by the Ministry taken for implementation of Ethanol Blended Petrol (EBP). The Committee desire that if the cost of Indian Crude oil basket goes up from the current levels due to increase in price of crude oil in the international market, the procurement price of Ethanol may also be increased suitably which will benefit the farmers as well as ethanol producers.

The Committee are of the opinion that the implementation of EBP Programme will provide new opportunities to Sugar Industry in general and Sugar farmers in particular. The Committee strongly desire that the Ministry should work seriously for EBP Programme and efforts should be made for removing the impediments being faced to achieve the specified blending targets across the country. The Committee, therefore, recommend that the Ministry should devise a comprehensive action plan for effective implementation of the programme with a clear-cut roadmap for achieving different blending percentages within a stipulated timeframe throughout the country.

Recommendation No.2

Production of Ethanol from various sources

The Committee observe that in response to the efforts made for procurement of Ethanol, OMCs have been able to receive only 54% of their total requirement for implementation of 5% EBP across the country. The Committee have been informed that at present, the production of Ethanol is from molasses, which is a byproduct in sugarcane industry.

The Committee note that other than sugarcane, ethanol can be produced from corn, maize, wheat and food grains having high starch content and many countries in the world have successfully implemented bio-fuel programmes based on variety of crops such as USA is running their Ethanol fuel programme on corn based Ethanol. The Committee observe that in India diversity of

vegetation is available and it can avail the advantage by speeding up R&D for producing Ethanol from different crops.

The Committee have also been informed that bio-ethanol can be produced from various food-grade and non- food grade feed stocks such as lingo-cellulosic bio-mass, agricultural waste, algae etc. and from bio-wastes and non-food grade cellulose such as rice husk and paddy straw and if a breakthrough is achieved, it will be a game changer and a solution to increasing energy needs of the country.

The Committee feel that OMC's sole dependence on molasses based Ethanol can limit the implementation of EBPP. The Committee therefore, desire that an Industry working group should be set up to look into the feasibility of production of Ethanol from variety of feed stocks based on edible/non-edible products and recommend that MoPNG should allocate more funds for research and development as the results of EBP will ultimately add to energy security and will be in national interest. The Committee also desire that MoPNG/OMCs should explore procurement of Ethanol from the standalone units in Maharashtra which produce Ethanol from denatured/rectified Spirit. The Committee further desire the MoPNG to conduct a cost benefit analysis regarding production of Ethanol from different feed stocks.

Recommendation No.3

Transportation cost of Ethanol

The Committee note that approximately 134 crore litres of ethanol is required to blend upto 5% level for implementation of ethanol blended Petrol programme across the country. The Committee have been informed that against the tenders floated for the total quantity of 297.90 crore litres of ethanol, the OMCs have received offer of 122.17 crore litres and could finalize 70.37 crore litres only and the percentage of finalized quantity to the required quantity in the different tenders ranges between 18.9% to 28.3%. Further, in certain States, such as Odisha, Chhattisgarh, Kerala and Jharkhand, no offers were received.

The Committee observe that one of the discouraging factors for sugar mills in supply of ethanol is the transportation cost included in its pricing mechanism. The Committee note that there are three slabs for price fixation for ethanol based on the differential distance of the destination from the sugar mills. It is seen that for a distance ranging between 101-300 Kms, Rs. 49/- are paid while for a distance of more than 300 Kms, Rs. 49.50 are paid by the OMCs. The Committee have been informed that if the delivery point is beyond 450 Kms, the cost realized by supply of ethanol becomes less for sugar mills due to higher transportation cost. The Committee, therefore, desire that the Ministry should review the issue of transportation cost of ethanol for distances beyond 450 Kms keeping the realistic cost in view.

Recommendation No.4

Simplification of procedure and reduction of taxes and duties

The Committee note with serious concern the procedural difficulties faced by OMCs and Sugar Mills in various States. The Committee have been informed that there are number of procedural formalities which need to be completed with different authorities for obtaining licenses. Further, in some States, quarterly permissions are required by excise departments. The Committee have also been informed that the OMCs face delay in issuance of import/export No-Objection Certificate and other permits by state excise departments for inter-state movement of ethanol which hampers the implementation of EBP programme. The Committee observe that there is no uniformity in the taxes/duties levied by different States. The Committee therefore, strongly recommend that this matter may be taken up by the Central Government with state governments for simplification of procedural difficulties and for bringing uniformity in the taxes and duties levied by various States.

Since Ethanol is not available in all the States, the Committee feel that there should be hassle free inter-state movement of Ethanol for blending purposes to give a fillip to EBP programme. Therefore, the Committee desire that

the Government may take up the matter with State Governments to remove/ease the restrictions imposed on inter-state movement of Ethanol for blending purposes only.

The Committee have further been informed that the responsibility of obtaining excise permission have been put on sugar mills by OMCs and they face difficulties in obtaining the requisite clearances. Due to this, sometimes sugar mills are not able to supply ethanol quantities on time and have to pay penalties to OMCs for non-compliance of orders. The Committee take a serious note of this situation and recommend that OMCs should actively pursue for obtaining clearances from various State level agencies/Departments instead of putting the onus on sugar mills. It has further been noted that the NoCs are issued by movement of documents through posts which consumes a lot of time in transit between the two States. The Committee recommend that the Ministry should persuade the State Governments to carry out these processes through modern electronic systems in order to save time.

Recommendation No.5

Priority to Ethanol for blending purposes

The Committee observe that the ethanol is mainly consumed by three sectors viz. potable liquor sector, chemical industry and by petroleum sector for blending purposes. The Committee have been informed that one of the main reasons behind inadequate supply of ethanol to OMCs is that the State Governments do not give priority to ethanol for blending purposes as they get more revenue from potable liquor sector and hence find it more remunerative.

The Committee are of the view that once the EBP programme is implemented successfully, the States and the country as a whole will be benefitted. Therefore, the Committee desire that MoPNG should take up the matter with the State governments for allocation of ethanol on priority basis to EBP programme apprising them of the benefits once it is implemented across the country.

Recommendation No.6**Import of Ethanol**

The Committee note that in pursuance to the CCEA's decision of November, 2012, which allowed OMCs to import Ethanol in case of shortfall in domestic supply, OMCs had floated tenders for procurement of Ethanol. However, the orders could not be finalized due to high landed price ranging between Rs. 69.45 to 91.98 per litre of Ethanol in comparison to the then benchmark price (Rs. 27 per litre) as procurement of Ethanol at this price could have affected the viability of EBP vis-à-vis petrol. In view of the results of this tender, CCEA decided that the Ethanol will be procured from Domestic sources only (produced from molasses).

The Committee are of the opinion that as the efforts for import of Ethanol were made more than two years ago, the Ministry should ascertain the prevailing price of Ethanol in the international market and apprise CCEA in this regard to allow import of Ethanol. The Committee also desire that till the time the supply from domestic sources improves, the Ministry should keep a track of the prevailing price of Ethanol in the international market and whenever it is advantageous to import, the Ministry and OMCs should avail the opportunity to import Ethanol. However, the Ministry may pursue a policy of giving first preference to procurement of Ethanol through domestic sources only and the shortfall may be met through imports if price advantage prevails after getting approval of CCEA.

Recommendation No.7**State-wise implementation of EBP Programme**

The Committee note with concern that the availability of Ethanol is not uniform across the country. In response to the tenders floated by OMCs for procurement of Ethanol, comparatively higher quantities of Ethanol are available in some States, while in other, the response has not been upto the mark. The

Committee observe that in sugarcane rich States such as Uttar Pradesh, Andhra Pradesh, Gujarat, Haryana, Tamil Nadu, higher quantities of Ethanol have been offered in comparison to the States of Bihar, Chhattisgarh, Jharkhand, Odisha, West Bengal where no offers have been received.

The Committee further observe that 5% mandatory blending with petrol still remains far from the target and at present Ethanol Blended Petrol programme (EBPP) is on only in 11 States. The Committee feel that instead of planning to implement the EBP programme across the country, the Ministry should consider to take up the State-wise implementation of the programme starting with the States where adequate quantity of Ethanol is available.

The Committee are of the view that continuous monitoring of the progress of EBP programme is crucial to its successful implementation. Therefore, the Committee desire that the Ministry/OMCs should set up State-level mechanism to monitor the procurement and blending of Ethanol with Petrol.

Recommendation No.8

Increasing production of Sugarcane

The Committee note that Brazil's Bio-fuel Programme is primarily being run based solely on sugarcane crop since Brazil has surplus production of sugarcane. The Committee note that the Ethanol Blended Petrol programme in India is based on Ethanol produced from cane molasses which is a by-product of the sugar industry. Though India being one of the largest producers of sugarcane in the world, the Government has preferred to use sugarcane for food purposes mainly i.e. production of Sugar. The Committee feel that India should try to emulate Brazil's strategy for Ethanol Fuel programme and the Government must strive for introduction of high yield varieties of Sugarcane in the country which can bring favorable conditions for all the stake holders including farmers.

The Committee note that Brazil is one of the major Bio-ethanol (from sugarcane) producers and also an exporter. Facilities in Brazil are dedicated to

produce exclusively Ethanol from sugar cane juice and its ethanol production is about 14 times of the Indian production. The Committee observe that the sugar mills in India also have been demanding that production of ethanol may be allowed directly from sugarcane juice during the period of surplus production of Sugarcane. However, CCEA allows production of ethanol from molasses only. The Committee recommend that the Ministry should consider the suggestion of sugar mills for production of Ethanol from sugarcane juice especially during the years of surplus production of sugarcane and the matter may be pursued in consultation with other Ministries to give a fillip to EBP programme.

Recommendation No. 9

Awareness regarding Ethanol Blended Petrol

The Committee note that EBP programme with 5% mandatory blending across the country is to be implemented and the OMCs are making efforts for procurement of requisite quantities of ethanol for this purpose. The Committee note that EBP is a new product for the users and the general public may have apprehension about the impacts of usage of Ethanol Blended Petrol in their vehicles. Further, the public may not be aware of the existence and availability of such a product at the retail outlets.

The Committee feel that the public at large may be educated about the benefits of the use of EBP so that they may not feel reluctant to use EBP. Further, the apprehension of certain sections with regard to the effect of ethanol based fuels on automobiles engines must be removed. The Committee, therefore, desire that the OMCs must strive for creating awareness among masses with regard to the use of ethanol as a safe fuel.

Recommendation No. 10

Storage capacity of OMCs

The Committee note that OMCs are floating quarterly tenders for procurement of ethanol from sugar mills. The Committee have been informed by the Indian Sugar Mills Association that Ethanol is not being lifted by the OMCs as per schedule due to inadequate storage capacity and the sugar mills have to bear

demurrages due to waiting for delivery of the ethanol to OMCs. The Committee have further been informed that one of the major problems being faced by the sugar mills is that the OMCs accept only the required quantity at one particular depot and reject the remaining quantity. The Indian Sugar Mills Association have requested that instead of rejecting the remaining quantity, OMCs may regulate and receive it at their neighboring depots. OMCs have informed that at present they have a storage capacity for 15-35 days which takes care of current requirements. However, they have informed that there is a need to augment the storage capacity at few locations which have already been identified based on the consumption pattern at these locations.

The Committee note that EBP programme has 5% mandatory blending target to be implemented across the country and then increase it to 10% and higher in the coming years. Since the present storage capacity appears to be less and with the increasing blending percentages, more storage capacity will be required in future. The Committee therefore, recommend that the Ministry/OMCs should build adequate storage capacity and sort out issues of rejection due to depot restrictions for successful implementation of the EBP programme.

Recommendation No.11

Incentivizing farmers and Ethanol Producers

The Committee note that the Ethanol based fuels are environment friendly and at the same time lead to enhancement of energy security of the country. However, low availability of ethanol has hindered the progress of EBPP due to shortage of feedstock i.e. molasses (a by-product of sugarcane processing) and demand of ethanol from other sectors. The Committee observe that the sugar mills do not find it remunerative to supply Ethanol to OMCs. The Committee feel that there is a need to encourage farmers and Ethanol producers by providing suitable incentives such as sale of subsidized seeds, fertilizers and agricultural equipments to encourage them to grow bio-fuel crops. The Committee also desire that MoPNG in coordination with Ministry of Agriculture should take up the

cause of providing incentives to farmers/ethanol producers for cultivating/developing edible and non-edible feed stocks.

The Committee note that CCEA in December, 2013 had decided that the OMCs and Sugar Industry Associations may interact with each other on a regular basis to achieve the target. The Committee desire that the Ministry/OMCs should interact with sugar industry at regular intervals for resolving issues related to procurement of Ethanol.

Recommendation No.12

Flexi Fuel Vehicles

The Committee note that steps have been initiated for implementation of 5% mandatory blending of ethanol across the country. Once this target is achieved, the blending percentage will be increased to 10% and more. The Committee have been informed that no change is required in the design of engines for use of 5% and 10% ethanol blended petrol except for some rubber components. Once the blending percentages go beyond 10% in the country, the automobiles should be compatible with the fuel. The Committee have further learnt that Brazil has developed flexi fuel vehicles which are running on different percentages of ethanol fuels (upto 100%). The Committee therefore, recommend that the MoPNG should initiate efforts in coordination with other concerned Ministries/ Automobile Research Association of India (ARAI) and IOC (R&D) for development of flexi-fuel engines and research in this direction may be speeded up.

Recommendation No.13

Levying of taxes/duties on ethanol

The Committee note that the State Governments levy taxes/duties on fuel ethanol used for ethanol blended petrol programme. The Committee have been informed by the representatives of Indian Sugar Mills Association that as per Entry 97 of the Union List, any matter not enumerated in List II (State List) or List III (Concurrent List) shall be governed by the Union Government and Liquor fit for

human consumption only has been mentioned in the State List. The Committee have been informed by ISMA that the rest of the alcohols viz. industrial alcohol and fuel grade ethanol do not find mention in the State List and hence taxes/duties imposed on fuel ethanol by State Governments should be stopped and instead should be levied by the Union Government which can reduce the procedural formalities.

The Committee are of the view that this matter needs to be clarified in the light of the proposed legislation on GST and therefore, recommend that the Ministry of Petroleum and Natural Gas should take up with the concerned Ministries as to whether the State Governments have the authority to levy taxes/duties on ethanol unfit for human consumption.

Recommendation No.14

Bio-Diesel Policy

The Committee note that the Bio-Diesel policy was announced by the Ministry of Petroleum and Natural Gas in 2005. The Indian strategy for implementation of Bio-Diesel Policy is based on production of Bio-Diesel from non-edible oil seeds like Jatropha and Pongamia plants only and conducive conditions for its growth have been found in the country. The Committee note that these plants can grow in wastelands or degraded forests in arid to semi-arid conditions. The Committee, therefore, desire that activities like identification of wastelands, suitable varieties of Jatropha/Pongamia be conducted in a time bound manner.

The Committee have been informed that the production of Bio-Diesel producing seeds is commercially insignificant in India and at the 20 identified purchase centers, no quantity of bio-diesel has been offered by the producers. The Committee feel that in case of bio-diesel policy, a lot of ground work needs to be completed before the policy could be implemented. In this regard, the Committee further note that the Bharat Renewable Energy Limited (BREL) which is a joint venture of BPCL for promotion of Bio-Fuels has completed around 10,000 acres of plantations in last 3-4 years out of the 1,50,000 acres of waste

lands offered by the Government of U.P. Since barely 6% of the total offered land has been covered by BREL, the Committee desire that the other OMCs should also come forward to participate in this project and expand the cultivation of Jatropha on the offered land. The Committee also desire that the MoPNG/OMCs should pursue other State Governments for allocation of wastelands for cultivation of seeds and to take up the work in identified areas.

The Committee observe that the Ministry of New & Renewable Energy (MNRE) has been made custodian of the National Policy on Bio-fuels and feel that different Ministries like MNRE, Ministry of Agriculture & Ministry of Petroleum and Natural Gas should coordinate among themselves in order to give an early start to National Bio-Diesel Policy. The Committee feel that the Bio-Diesel Policy is in its preliminary stage and therefore, desire that in order to realize the objectives specified in the Bio-Diesel Policy, a long term plan for its step-wise implementation should be devised and monitored properly.

New Delhi;
August, 2015
Shravana, 1937 (Saka)

PRALHAD JOSHI,
Chairperson,
Standing Committee on
Petroleum & Natural Gas.

Annexure-I**State-wise Sugar Production Capacity 2013-14 Sugar Year**

Sl. No.	States	No. of Sugarmills	Annual Installed Capacity for production of Sugar (Lac Tons)
1	Andhra Pradesh	34	14.86
2	Bihar	11	6.17
3	Gujarat	18	14.52
4	Haryana	14	5.59
5	Karnataka	62	41.46
6	Madhya Pradesh	14	3.51
7	Maharashtra	157	100.77
8	Punjab	16	5.73
9	Tamil Nadu	42	28.61
10	Uttar Pradesh	119	94.68
11	Uttarakhand	9	4.61
12	Others	13	2.6
13	All India	509	323.11

Distribution of distilleries in India

Capacity in KL per annum

Sl. No.	States	Distilleries attached with sugar mills						Standalone Distilleries		Total	
		Private Sector		Cooperative Sector		Total					
		No.	Capacity	No.	Capacity	No.	Capacity	No.	Capacity	No.	Capacity
1	Andhra Pradesh	13	124455	1	545	14	125000	13	80914	27	205914
2	Bihar	5	38950			5	38950	4	36420	9	75370
3	Chhattisgarh							1	36000	1	36000
4	Daman							4	17160	4	17160
5	Goa							5	5444	5	5444
6	Gujarat			9	91860	9	91860	6	87450	15	179310
7	Haryana			1	4550	1	4550	6	85000	7	89550
8	Himachal Pradesh							3	18600	3	18600
9	Jammu & Kashmir							5	31950	5	31950
10	Karnataka	10	168169	3	34200	13	202369	25	250295	38	452664
11	Kerala	1	2820	1	2700	2	5520	7	26410	9	31930
12	Madhya Pradesh							17	357976	17	357976
13	Maharashtra	5	84500	56	702445	61	786945	18	178777	79	965722
14	Nagaland							1	1350	1	1350
15	Odisha	2	10720	1	3000	3	13720	4	6465	7	20185
16	Puducherry							2	16200	2	16200
17	Punjab	2	18120	2	18000	4	36120	6	249859	10	285979
18	Rajasthan	2	11400			2	11400	7	87165	9	98565
19	Sikkim							1	3504	1	3504
20	Tamil Nadu	10	160975	2	33000	12	193975	9	148650	21	342625
21	Uttar Pradesh	26	683271	7	72000	33	755271	20	1814560	53	2569831
22	Uttarakhand			1	15000	1	15000	2	84190	3	99190
23	West Bengal							2	15500	2	15500
		76	1303380	84	977300	160	2280680	168	3639839	328	5920519

Annexure-II

State-wise production of ethanol			
State	Production of alcohol/ethanol (million litres)		
	2013-14[#]	2012-13	2011-12
Bihar	83.75	72.75	56.25
Uttar Pradesh	873.50	1043.00	963.25
Uttarakhand	38.25	44.75	43.75
Haryana	70.50	65.25	69.00
Punjab	55.75	55.25	47.75
Gujarat	120.50	123.50	111.00
Maharashtra	682.50	731.50	788.50
Andhra Pradesh	118.00	120.00	136.00
Tamil Nadu & Puducherry	195.50	264.75	312.50
Karnataka	421.25	375.25	391.75
Others	60.75	40.00	36.25
All-India	2720.25	2936.00	2956.00
# = provisional and may change slightly			
Notes:			
1. Production of alcohol has been calculated at the standard of 250 litres per tonne			
2. The statement shows the total production of alcohol/ethanol (estimated)			
3. Since fuel grade ethanol for blending is 99.6% pure (5% volume loss against alcohol), production of the same is restricted against the firm demand only			

(Source : ISMA)

The Committee held its meeting on Thursday, 04th December, 2014 from 1600 hrs to 1740 hrs in Committee Room '62', Parliament House, New Delhi.

Shri Pralhad Joshi - Chairperson
LOK SABHA

- RAJYA SABHA**

- SECRETARIAT**

- | | | | |
|----|----------------------|---|------------------|
| 1. | Shri A.K.Singh | - | Joint Secretary |
| 2. | Shri S.C. Choudhary | - | Director |
| 3. | Smt. Jagriti Tewatia | - | Deputy Secretary |

Representatives of the Ministry of Petroleum & Natural Gas

- | | | | |
|----|-----------------------|---|-----------------|
| 1 | Shri Saurabh Chandra | - | Secretary |
| 2. | Shri Sandeep Poundrik | - | Joint Secretary |

Representatives of Public Sector Undertakings

- | | | | |
|----|---------------------|---|--|
| 1. | Shri B. Ashok | - | Chairman, IOCL |
| 2. | Shri S. Varadrajan | - | CMD, BPCL |
| 3 | Ms. Nishi Vasudeva | - | CMD, HPCL |
| 4 | Shri M. Nene | - | Director (Marketing), IOCL |
| 5 | Shri K. K. Gupta | - | Director (Marketing), BPCL |
| 6 | Shri Y.K. Gawali | - | Director (Marketing), HPCL |
| 7 | Shri N. Manohar Rao | - | GM (Operations), BPCL |
| 8 | Shri Uday M. Gore, | - | Chief Manager (Operations & Retail),
BPCL |

2. At the outset, Hon'ble Chairperson welcomed the Members and representatives of the Ministry of Petroleum and Natural Gas and PSUs to the sitting of the Committee held to have a briefing by the representatives of the MoP&NG on the subject 'Ethanol Blended Petrol & Bio-Diesel Policy'. After the customary introduction, the representatives of the Ministry briefed the Committee on the subject. A power point presentation was also made by the representatives of PSUs on the subject explaining about the implementation status and progress of Ethanol Blended Programme (EBP) in India, its commercial viability and other issues.

3. The Committee then deliberated upon various aspects related to the subject such as execution of the Ethanol Blended Petrol Programme since its inception and issues related to non-achievement of the mandatory target of 5% blending of ethanol with petrol in all States/UTs, fixation of procurement price of ethanol by oil-companies, intricacies involved in the tendering process for ethanol procurement, very less procurement of ethanol against the targets fixed, price differential of ethanol and its benchmark pricing, delay in issuance of licenses and inter-state export import permits along with other procedural requirements. In addition, existing practical constraints in

the implementation of EBP Programme i.e. finalization of marketing costs including excise duty on petrol, value added tax, and negotiations with sugar mill owners over the pricing were also deliberated at length.

4. The clarifications sought by the Members on various points were provided by the representatives of the Ministry. However, on some of the points where the information was not readily available, the Hon'ble Chairperson instructed the Ministry to furnish the written replies to the Secretariat at the earliest.

5. A copy of the verbatim proceedings of the sitting has been kept for record.

The Committee then adjourned.

MINUTES
STANDING COMMITTEE ON PETROLEUM & NATURAL GAS
(2014-15)

EIGHTH SITTING
(07.01.2015)

The Committee sat on Wednesday, the 7 January, 2015 from 1130 hrs. to 1330 hrs. in Committee Room 'C', Parliament House Annexe, New Delhi.

PRESENT

Shri Pralhad Joshi - Chairperson

MEMBERS
LOK SABHA

2. Dr. Ravindra Babu Pandula
3. Shri P.K. Biju
4. Shri Kalikesh N. Singh Deo
5. Smt. Rama Devi
6. Shri Elumalai V.
7. Dr. Thokchom Meinya
8. Smt. Pratima Mondal
9. Shri Arvind Sawant
10. Shri Raju Shetty
11. Dr. Bhola Singh
12. Shri Ravneet Singh
13. Shri Rajesh Verma
14. Shri Om Prakash Yadav
15. Shri Laxmi Narayan Yadav

RAJYA SABHA

16. Shri Ishwarlal Shankarlal Jain
17. Shri Prabhat Jha
18. Shri Bhubaneshwar Kalita
19. Smt. Gundu Sudharani

SECRETARIAT

1. Shri A.K.Singh - Joint Secretary
2. Shri S.C. Chaudhary - Director
3. Smt. Jagriti Tewatia - Deputy Secretary

2. At the outset, Hon'ble Chairperson welcomed the Members and representatives of the Ministry of Petroleum and Natural Gas and PSUs to the sitting of the Committee held to have a briefing by the representatives of the Ministry of P&NG on the subject 'Safety, Security and Environmental Aspects in Petroleum Sector'. After the customary introduction, the representatives of the Ministry made a brief presentation on safety and security measures being undertaken in petroleum sector in India.

3. **

4. The Committee then reassembled after lunch break. Thereafter, the Committee called the representatives of MoPNG, OMCs and Sugar Mill Associations to take their evidence on the subject, "Ethanol Blended Petrol and Bio- Diesel Policy". The Committee then discussed various issues related to the subject such as purchase and availability of ethanol by sugar manufacturers to oil marketing companies and constraints being faced in the process, storage capacity available with OMCs for storing Ethanol, State levies and taxes on the purchase and interstate movement of Ethanol, fixation of procurement price of ethanol by oil-companies. In addition to this, terms and conditions of the tendering process for ethanol procurement, price differential of ethanol and its benchmark pricing. and negotiations with sugar mill owners over the pricing etc. were also deliberated upon.

5. The clarifications sought by the Members on various points were provided by the representatives of the Ministry. However, on some of the points where the information was not readily available, the Hon'ble Chairperson instructed the Ministry to furnish written information to the Secretariat at the earliest.

6. A copy of the verbatim proceedings of the sitting has been kept for record.

The Committee then adjourned.

MINUTES
STANDING COMMITTEE ON PETROLEUM AND NATURAL GAS
(2014-15)

FIFTEENTH SITTING
(11.06.2015)

The Committee held its sitting on 11th June, 2015 from 1100 hrs to 1300 hrs in Committee Room 'C', Parliament House Annexe, New Delhi.

PRESENT

Shri Pralhad Joshi - Chairperson

MEMBERS
LOK SABHA

- 2 Dr. Ravindra Babu
- 3 Shri P. K. Biju
- 4 Shrimati Rama Devi
- 5 Shri Elumalai V.
- 6 Shri Naranbhai Kachhadiya
- 7 Dr. Thokchom Meinya
- 8 Shrimati Jayshreeben Patel
- 9 Shri Arvind Sawant
- 10 Shri Raju Shetti
- 11 Dr. Bholu Singh
- 12 Shri Rajesh Verma
- 13 Shri Om Prakash Yadav
- 14 Shri Laxmi Narayan Yadav

RAJYA SABHA

- 15 Shri Ishwarlal Shankarlal Jain
- 16 Shri Prabhat Jha
- 17 Shri Praful Patel

Secretariat

- | | | | |
|---|---------------------|---|---------------------|
| 1 | Shri S.C. Choudhary | - | Director |
| 2 | Shri H. Ram Prakash | - | Additional Director |

Representatives of the Ministry of Petroleum & Natural Gas

- | | | | |
|----|---------------------------|---|----------------------|
| 1 | Shri Kapil Dev Tripathi | - | Secretary |
| 2. | Shri Ajay Prakash Sawhney | - | Additional Secretary |
| 3. | Shri Sandeep Poundrik | - | Joint Secretary |

Representatives of Public Sector Undertakings and other Organisations

- | | | | |
|----|-------------------------|---|--|
| 1. | Shri B. Ashok | - | Chairman, IOCL |
| 2. | Shri S.Varadarajan | - | CMD, BPCL |
| 3. | Ms. Nishi Vasudeva | - | CMD, HPCL |
| 4. | Shri Abinash Verma | - | DG, Indian Sugar Mills Association |
| 5. | Shri Dinesh Kumar Irani | - | Vice President, Ethanol Manufacturers Association Of India |
| 6. | Dr. Vidya Murkumbi | - | Chairperson, Shree Renuka Sugars Limited |

2. At the outset, Hon'ble Chairperson welcomed the Members and representatives of the Ministry of Petroleum and Natural Gas, OMCs and Sugar Mills Association to the sitting of the Committee held to have evidence of the representatives of the Ministry of P&NG and accompanying officials of PSUs/Sugar Mills on Ethanol Blended Petrol and Bio-diesel Policy'. Thereafter, the representatives of the Ministry, OMCs and Sugar Mill Associations made presentations on the key issues and progress achieved in implementation of EBP and Bio-Diesel Policy.

3. The Committee then discussed various issues related to the subject such as purchase and availability of ethanol by sugar manufacturers to oil marketing companies, reasons for delay in lifting of Ethanol by OMCs, delay in issuance of tenders by OMCs for purchase of Ethanol, action plan devised for augmenting the storage capacity for ethanol, State levies and taxes on the purchase and interstate movement of Ethanol,

matter of speeding up the verification and other procedures for obtaining Excise clearances etc.

4. The clarifications were sought by the Members. However, on some of the points where the information was not readily available, the Hon'ble Chairperson instructed the Ministry to furnish written replies to the Secretariat at the earliest. The representatives of the Sugar Mills Associations then withdrew. The Committee then discussed various other issues related to Petroleum sector with the representatives of Ministry and OMCs such as pricing of sensitive petroleum products, under-recoveries borne by OMCs on account of sale of these products, idling of rigs haired for exploration by upstream Oil companies in the KG Basin, problems related to supply of LPG, functioning of Pipavav port in Gujarat, etc.

5. The Members sought clarifications on certain points. However, on some of the points where the information was not readily available, the Hon'ble Chairperson instructed the Ministry to furnish the written replies to the Secretariat at the earliest.

6. A copy of the verbatim proceedings of the sitting has been kept for record.

The Committee then adjourned.

MINUTES
STANDING COMMITTEE ON PETROLEUM AND NATURAL GAS
(2014-15)
NINETEENTH SITTING
(11.08.2015)

The Committee sat on Tuesday, the 11 August, 2015 from 1500 hrs. to 1530 hrs. in Committee Room 'C', Parliament House Annexe, New Delhi.

PRESENT

Sh. Pralhad Joshi - Chairperson

MEMBERS

LOK SABHA

- | | |
|----|----------------------------|
| 2 | Dr. Ravindra Babu |
| 3 | Shrimati Rama Devi |
| 4 | Shri Elumalai V. |
| 5 | Shrimati Pratima Mondal |
| 6 | Shri Ashok Mahadeorao Nete |
| 7 | Shrimati Anupriya Patel |
| 8 | Shri Arvind Sawant |
| 9 | Shri Raju Shetti |
| 10 | Dr. Bhola Singh |
| 11 | Shri Rajesh Verma |
| 12 | Shri Laxmi Narayan Yadav |

RAJYA SABHA

- | | |
|----|--------------------------------|
| 13 | Shri Ishwarlal Shankarlal Jain |
| 14 | Shrimati Gundu Sudharani |
| 15 | Shri Praful Patel |

SECRETARIAT

- | | | | |
|----|---------------------|---|----------------------|
| 1. | Shri A.K.Singh | - | Additional Secretary |
| 2. | Shri S.C. Chaudhary | - | Director |
| 3. | Shri H.Ram Prakash | - | Additional Director |

2. At the outset, Hon'ble Chairman welcomed the Members to the sitting of the Committee held to consider and adopt Draft Report on the subject, 'Ethanol Blended Petrol and Bio-Diesel Policy'.

3. The Committee, thereafter, considered the draft Report. Some of the Members gave suggestions given below for incorporation in the Report.

(i) Recommendation No. 1 : (To be added in last para)

"The Committee also desire that if the cost of Indian Crude oil basket goes up from the current levels due to increase in price of crude oil in the international market, the procurement price of Ethanol may also be increased suitably which will benefit the farmers as well as ethanol producers. The Committee are of the opinion that the implementation of EBP Programme will provide new opportunities to Sugar Industry in general and Sugar farmers in particular".

(ii) Recommendation No.2:- (To be added in last para)

"The Committee also desire that MoPNG/OMCs should explore procurement of Ethanol from the standalone units in Maharashtra which produce Ethanol from denatured/rectified Spirit".

(iii) Recommendation No. 3:- (To be added in last para)

" keeping the realistic cost in view".

(iv) Recommendation No. 13 :- (First line of second para may be replaced with the following)

"The Committee are of the view that this matter needs to be clarified in the light of the proposed legislation on GST and therefore,"

4. The Committee authorised the Chairperson to make suitable changes and finalize the report and present/lay in both the Houses of Parliament.

The Committee then adjourned.