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STANDING COMMITTEE ON PETROLEUM & NATURAL GAS (2007-08)

FOURTEENTH LOK SABHA

MINISTRY OF PETROLEUM & NATURAL GAS

SUPPLY, DISTRIBUTION AND MARKETING OF NATURAL GAS INCLUDING CNG AND LNG

SIXTEENTH REPORT

LOK SABHA SECRETARIAT
NEW DELHI

September, 2007/Bhadrapada, 1929 (Saka)

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Presented to Speaker Lok Sabha on 21.10.2007

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LOK SABHA SECRETARIAT
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Lok Sabha

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18 Shri Vanlalzawma
19 Shri Ratilal Kalidas Varma
20 Shri Rajesh Verma
21 Shri A.K.S. Vijayan

Rajya Sabha

22 Shri Satish Chandra Misra
23 Shri Ahmed Patel
24 Shri C. Perumal
25 Shri Rajeev Shukla
26 Shri Subhash Prasad Yadav
27 Ms. Mabel Rebello
28 Shri Ramdas Agarwal
29 Shri Tapan Kumar Sen
30 Shri M.Rajasekara Murthy
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2. Shri R.C.Kakkar - *Deputy Secretary*
3. Shri P.C.Tripathy - *Under Secretary*
4. Smt. Reena Gopalakrishnan - *Committee Officer*

COMPOSITION OF THE STANDING COMMITTEE ON PETROLEUM & NATURAL GAS (2006-07)

Shri N. Janardhana Reddy - Chairman

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7 Shri Lal Muni Choubey
8 Shri Ravinder Naik Dharavath
9 Dr. M. Jagannath
10 Shri Jai Prakash (Hissar)
11 Adv. Suresh Kurup
12 Shri Sudam Marandi
13 Shri P. Mohan
14 Shri Sukdeo Paswan
15 Shri Nakul Das Rai
16 Shri Lakshman Singh
17 Shri Rajiv Ranjan 'Lalan' Singh
18 Shri Ramjilal Suman
19 Shri Ratilal Kalidas Varma
20 Shri A.K.S. Vijayan
21 Shri Ram Kripal Yadav

Rajya Sabha

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23 Ms. Mabel Rebello
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27 Shri Amir Alam Khan
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1. Shri S.K.Sharma - *Additional Secretary*
2. Shri N.K.Sapra - *Joint Secretary*
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4. Shri P.C.Tripathy - *Under Secretary*
5. Smt. Reena Gopalakrishnan - *Committee Officer*

COMPOSITION OF THE STANDING COMMITTEE ON PETROLEUM & NATURAL GAS (2007-08)

Shri N. Janardhana Reddy - Chairman

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3. Smt. Anita Jain - *Director*
4. Shri P.C.Tripathy - *Deputy Secretary*
5. Smt. P.Jyoti - *Senior Executive Assistant*

INTRODUCTION

I, the Chairman, Standing Committee on Petroleum & Natural Gas (2007-08) having been authorised by the Committee to submit the Report on their behalf, present this Sixteenth Report on 'Supply, Distribution and Marketing of Natural Gas including CNG and LNG' of the Standing Committee on Petroleum & Natural Gas.

2. The Committee took evidence of the representatives of the Ministry of Petroleum and Natural Gas and the concerned Public Sector Undertakings/Organisations at their sitting held on 24.1.2007.

3. The Committee considered and adopted the Report at their sitting held on 10.09.2007.

4. The Committee wish to express their thanks to the representatives of the Ministry of Petroleum and Natural Gas and the concerned Public Sector Undertakings/Organisations for placing their views before them and furnishing the information desired in connection with examination of the subject.

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

New Delhi;
11 September, 2007
20 Bhadrapada, 1929 (Saka)

N. JANARDHANA REDDY,
Chairman,
Standing Committee on
Petroleum & Natural Gas

REPORT

CHAPTER- I

GAS SECTOR –AN OVERVIEW

Natural gas has emerged as the most preferred fuel/feedstock due to its inherent environmentally benign nature, greater efficiency and cost effectiveness. The demand of natural gas has sharply increased in the last two decades at the global level. In India, the natural gas sector has gained importance, particularly over the last decade, and is being termed as the fuel of the 21st Century. Natural gas is the fastest growing primary energy source amongst fossil fuels. It is projected to grow around 3-4 times in the next 20 years.

1.2 Natural gas is a colourless, odourless mixture of hydrocarbons, normally consisting of methane, ethane, propane, butane and heavier hydrocarbons, which can exist in gaseous form at ambient pressure and temperature. Its components are normally called C1 (Methane), C2(Ethane), C3(Propane), C4(Butane), etc, based on the number of carbon atoms in the molecule of the components. The normal impurities found are Hydrogen Sulphide, Nitrogen and Carbon-dioxide. The composition of this mixture can vary from field to field. However, methane is invariably the major constituent of natural gas. All the hydrocarbon components of natural gas can be used as fuel for power plants, other industries and also for domestic purposes. The C1 component (Methane) is used as feedstock for fertiliser industry. The C2 and C3 components are used as feedstock in petrochemicals industry. The C3 and C4 fractions of natural gas are extracted in 1:1 weight ratio to make Liquefied Petroleum Gas (LPG). The heavier hydrocarbon components are used as solvents and feedstock for various other chemical industries. Prior to the separation of heavier hydrocarbon components (C3 and above), the gas is known as rich gas, and, after extraction of the heavier hydrocarbons, the balance gas is known as lean gas.

1.3 Explaining the merits of natural gas, the Ministry in its note to the Committee, stated:-

"The relative merits of natural gas to alternate hydrocarbon fuels are driving the demand for natural gas. Natural gas is an eco-friendly, clean fuel, offering higher thermal efficiencies and is a better feedstock for fertilisers. Gas turbine Power plants have lower capital cost, shorter gestation period and shorter start-up time to cater to peak load requirement. Further, natural gas contains very low sulphur, making it an ideal fuel for transportation purpose. Lower carbon-monoxide and soot emissions imply environmental friendliness of the fuel. In addition to its environment-friendliness, natural gas has other advantages. It is lighter than air and, therefore, safer, as in the case of a leakage, it does not tend to accumulate. As the supply of gas is uninterrupted and gas is transported through the pipeline, consumers need not generally maintain an inventory, unlike other fuels/feedstock, which results in substantial savings in project cost as well as operating cost.

In view of the strategic shift from liquid fuel to natural gas, the role of natural gas in India's energy security assumes greater significance. The major policy objectives for securing energy needs, include enhancing fuel supply to match demand, promoting optimal mix of fuels and ensuring diversity of sources. With the growing energy deficit and demand growing at 6 per cent per annum, coupled with sky-rocketing crude prices, natural gas appears to be emerging as a very important fuel for the country."

(A) PRODUCTION, DEMAND AND AVAILABILITY OF GAS IN THE COUNTRY

(i) Production of Natural Gas

1.4 Production of natural gas, which was almost negligible at the time of independence, is currently at the level of around 88 million standard cubic meters per day (MMSCMD). The main producers of natural gas are Oil & Natural Gas Corporation Ltd. (ONGC),Oil India Limited (OIL) and Joint Ventures of Panna-Mukta and Tapti and Ravva. Under the Production Sharing Contracts, private parties are also producing gas from some of the fields. The Government has also offered blocks under New Exploration Licensing Policy (NELP) to private and public sector companies with the right to market gas at market determined prices.

1.5 Most of the production of gas comes from the Western offshore area. The on-shore fields in Assam, Andhra Pradesh and Gujarat are other major producers of gas. Smaller quantities of gas are produced in Tripura, Tamil Nadu and Rajasthan. OIL is operating in Assam & Rajasthan whereas ONGC is operating in the Western offshore fields and in other States. Most of the gas produced by ONGC and partly by JV consortiums is marketed by the GAIL (India) Ltd. The gas produced by OIL is marketed by OIL itself. Gas produced by Cairn Energy from Lakshmi fields and Gujarat State Petroleum Corporation Ltd. (GSPCL) from Hazira fields is being sold directly by them at market determined prices.

(ii) Demand and Availability of Natural Gas

1.6 The demand for natural gas in the year 2007-08 has been projected at around 179 MMSCMD by the Working Group on Petroleum & Natural Gas Sector for the XIth Plan. The average supply during the year 2006-07 was around 96 MMSCMD. Out of this supply, 73 MMSCMD was from indigenous sources. Apart from this around 23 MMSCMD of Liquefied Natural Gas (LNG) was imported in the country during 2006-07 at LNG terminals at Dahej and Hazira. So more than 50% of the estimated demand of gas in the country, is being met from indigenous fields and R-LNG.

1.7 The estimated demand in the country for natural gas in the next 20 years, as informed by the Ministry of Petroleum & Natural Gas is as below:-

"Year	Demand (MMSCMD)
2010-11	262.07^{+}
2015-16	308*
2024-25	391$^{\sim}$

$^{+}$According to the Report of the Working Group on Petroleum & Natural Gas Sector for the XI Plan (2007-2012)
~ According to India Hydrocarbon Vision 2025
*Interpolated assuming uniform growth."

1.8 As against such a demand scenario, the gas supply projections from indigenous sources for the coming years till 2011-12, as furnished by the Ministry, is as below:-

"Gas supply projections (MMSCMD)					
Sources	**07-08**	**08-09**	**09-10**	**10-11**	**11-12**
ONGC + OIL (A)	57.28	58.42	55.69	54.67	51.08
Pvt./JVs(As Per DGH) (B)	23.26	61:56	60.28	58.42	57.22
Projected Domestic Supply (A+B)	80.54	119.98	115.97	113.09	108.30
Additional Gas Anticipated (C)			74	84	94
Total Projected Supply Scenario 1 (A+B)-conservative	80.54	119.98	115.97	113.09	108.30
Total Projected Supply Scenario 2 (A+B+C)-optimistic	80.54	119.98	189.97	197.09	202.30"

(B) PRICING OF GAS

1.9 At present, there are broadly two pricing regimes for gas in the country, - gas priced under APM and non-APM or free market gas. The price of APM gas is set by the Government. As regards non-APM/free market gas, this could also be broadly divided into two categories, namely, imported LNG and domestically produced gas from JV fields. While the price of LNG imported under term contracts is governed by the Sale and Purchase Agreement (SPA) between the LNG seller and the buyer, the spot cargoes are purchased on mutually agreeable commercial terms. As regards JV gas, its pricing is governed in terms of the PSC provisions. At present, out of the total gas consumption of 96 MMSCMD in the country, 53 MMSCMD is APM gas and 43 MMSCMD is non-APM gas (20 MMSCMD JV gas and 23 MMSCMD RLNG). APM gas, which comes from the existing fields of ONGC and OIL given to them on nomination basis by the Government, is on the decline; while it forms about 60% of the total gas available at present, its share is likely to come down to around 15-20% by 2011-12; while the quantities under RLNG and JV production will go up.

1.10 The following data has been furnished by the Ministry of Petroleum & Natural Gas with respect to the existing rates being charged for natural gas to various sectors/consumers:

"SL .No	Network / Region	APM consumers		Non-APM Consumers
		(Power & Fertilizer sectors)	Price applicable to small consumers (allocation upto 50000 SCMD & City Gas Distribution companies)	Price applicable to Non-APM Consumers (incl. internal consumption by GAIL)
1	Mumbai, South Gujarat & along HVJ	Rs.3200/ MSCM (w.e.f 01.07.2005)	Rs.3840/MSCM (wef 06.06.2006)	USD 4.75/MMBTU (w.e.f 01.04.2006)
2	KG Basin & Cauvery Basin	Rs.3200/ MSCM (w.e.f 01.07.2005)	Rs.3840/MSCM (w.e.f 06.06.2006)	USD 3.50/MMBTU (w.e.f 01.08.2006)
3	NE region	Rs.1920/ MSCM (w.e.f 01.07.2005)	Rs.2304/MSCM (w.e.f 06.06.2006)	Rs. 3200/ MSCM (w.e.f 01.07.2005)

The above gas price is basic price and is linked to a calorific value of 10000Kcal on NCV basis. Royalty, taxes and duties & transmission tariff shall be extra as applicable."

1.11 The Committee have been informed that though the price of natural gas is based on calorific value, the calorific value of crude oil is generally not measured. However, it is estimated that crude oil has Net Calorific Value (NCV) in the range of 10,500 to 11,500 kcal/kg. APM gas is priced in Rupees per cubic meter, linked to an NCV Of 10,000 kcal/cubic meter. As against these, non-APM gas is priced in calorific terms in US$ per million BTU. Presently APM gas is about 15% the price of crude oil in terms of Calorific value. Non-APM gas is about 40% of the price of crude.

1.12 On being asked about the factors which were taken into account while fixing the above rates/laying down the procedure, the Ministry of Petroleum & Natural Gas, in a written reply, stated as under:-

"APM Gas

Most of the gas under Government's administered price mechanism (APM) is from Mumbai High, South Bassein and Gujarat onland fields, which are past their peak and ageing. Substantial investments are required for the continued production of gas from these areas. Further, the cost of production of gas is increasing steeply with the producers having to go deeper and deeper offshore for exploration and production. The Government fixes the price of APM gas being produced from ONGC and OIL fields given to them on nomination basis. However, there is need to move towards a market-determined pricing in a phased manner, as fields are no longer awarded on nomination basis to national oil companies and also as the cost of production has gone up steeply.

Pre-NELP

The price is determined in terms of Production Sharing Contract (PSC) provisions for domestically produced gas.

Pricing of gas with reference to NELP provisions.

As per the provisions of PSC under NELP, the price of natural gas for sale to consumers shall be market-driven. Prior approval of MoP&NG has to be obtained for the formula or the basis on which the price is fixed. It has been provided that the Contractor shall sell all Natural Gas produced and saved from the Contract Area by arm's length transactions.

R-LNG

Sale and Purchase Agreements (SPA) between the LNG purchasers and the buyer determine the price of Regasified LNG to customers."

1.13 While referring to the gas as a fuel vis-a-vis the oil and the nuances in their pricing, the Secretary P&NG, during a briefing session before the Committee, deposed as under:

"One of the reasons as to why gas price had been much lower as compared to crude, even though gas is a much better fuel compared to crude, was that crude can travel from any part of the world to any other part while gas was not travelling. In fact, when a

fuel becomes more mobile, it gets more value. Today, the maximum graded commodity in the whole world is crude and no other commodity is traded as widely.

Coming to crude oil, 82 per cent of crude is not consumed in the countries in which it is produced. Eighty-two per cent of the crude which is produced is traded internationally. If you were to take gas, only around 1970s, gas started emerging as a fuel. At that time, it was just being locally produced and locally used. So, not many people knew about this. But once gas became available in larger quantities, naturally technology started developing for making it safe and for liquefying it, for transporting it to other countries which needed this clean form of energy. Now, gas is also becoming more mobile. How do you make it more mobile? Firstly, within a country where it is produced, the country could develop a grid. Now the country which produces gas surplus to its requirement can liquefy it and transport it as a liquid in a container through a ship to another country where they will reconvert it into gas through a process called re-gassification and they will use it. Basically, LNG terminals do that.

The third is geography, if the geo political factors permit, you can import gas from neighbouring country which produces gas surplus to its requirement. So, gas is becoming more mobile and hence its value as perceived by the users is also steadily increasing. Within the next 10 or 15 years, take any fuel, gas, crude or other forms of refined products like petrol, diesel, naptha, fuel oil, furnace oil, etc., for generating one unit of heat, how much should it cost? This is how we arrive at the cost of the fuel – cost per unit heat generation, that unit heat is British thermal unit which is an internationally recognised unit. So, whichever unit you take, for buying one unit of heat, how much should we pay? Now, as gas becomes more and more mobile, its price will inch up towards the crude price. That is what is really happening globally today. Fifteen years ago, gas was available for 1 $; three years ago, it was available for 3 $ and today it is not available even for 6 $. If you have to just go and buy gas off the shelf for some immediate need – for instance, one State's Grid becomes dark, say in Maharashtra, and they want to buy gas immediately for the peak load, they are willing to pay even 10 $ today. That is the price of gas. Our estimate is that over the next five years, the price will reach 13 to 14 $ per million BTU which will be closer to crude price''

1.14 When asked about the salient features of the proposed gas pricing policy and whether there is a proposal to have a clause in the Production Sharing

Contracts to reflect the role of the regulator in determining the gas prices, the Ministry, in a written reply, submitted as under:-

> "The High Powered Pricing Committee which has been constituted is expected to come out with a clear set of guidelines. The main idea is to provide and ensure that the pricing is fixed in a transparent basis. It should be clearly readable, monitorable and verifiable. In the Production Sharing Contract (PSC) in the recent rounds of NELP and in particular in NELP-VI, the following clause is relevant to the subject question:
>
> **PSC-Article 21; Natural Gas**
>
> **Clause 21.7** The formula or basis on which the prices shall be determined pursuant to Article 21.6 shall be approved by the Government prior to the sale of Natural Gas to the consumers/buyers, within sixty (60) Business Days from the receipt of proposal or from the date of receipt of clarification/additional information, where asked for by the Government. For granting this approval, Government shall take into account the prevailing policy, if any, on pricing of Natural Gas including any linkages with traded liquid fuels, and it may delegate or assign this function to a regulatory authority as and when such an authority is in existence and in place. The formula or basis on which the prices shall be determined pursuant to Article 21.6 shall be approved by the Government prior to the sale of Natural Gas to the consumers/buyers, within sixty (60) Business Days from the receipt of proposal or from the date of receipt of clarification/additional information, where asked for by the Government. For granting this approval, Government shall take into account the prevailing policy, if any, on pricing of Natural Gas including any linkages with traded liquid fuels, and it may delegate or assign this function to a regulatory authority as and when such an authority is in existence and in place."

1.15 When the Committee desired to know the system of gas pricing prevalent in other countries, the following reply was furnished by the Ministry:-

> "Asia / Pacific Countries:
>
> The Asian gas market is dominated by LNG. The dominant players are Japan as a Buyer and Indonesia as a Seller. Originally, LNG prices to Japan were cost-based, but it later changed to the cost of

alternative fuel in power generation, i.e. oil. Most LNG prices are linked to JCC (Japanese oil price indicator).

An “S-Curve” (Floor & Ceiling Prices) concept has been introduced in the price formula. This provides an almost linear relationship of the LNG price relative to the price of basket of crude oil imported by Japan, as long as the basket prices remain within an agreed range. But when the price reaches floor or ceiling, the slope is moderated to protect the interests of the seller and the buyer respectively.

OECD Europe

Like the Asian LNG market, the European gas market is characterised by long-term take or pay contract. The European gas price level is higher than the North American level, but lower than the Asian level, largely because of the mix of pipeline gas and LNG. The price formulae in European contracts are mainly based on the netback-pricing rule, with crude oil or oil products as main escalators, since oil products have historically been the main competitors to gas.

All the main suppliers to Europe have crude prices and/or petroleum product prices as price escalators in their contracts. Other escalators, like inflation and electricity prices, are also used, but the predominant one is oil. Gas prices are normally re-calculated quarterly with a 6 to 9 month lag to oil price changes.

Although an overwhelming majority of long-term European gas supplies are characterised by netback-pricing, two new features have recently emerged:

(a) In a few contracts of gas sales for power generation, a new pricing formula based on the ‘indifference principle’ has been used. The gas price in these contracts is completely decoupled from the oil price. The initial base price in such contract could typically be 30% higher than in an oil-based contract, and thus represents a reduction in risk from the seller’s point of view. This type of contract is a response to a need for diversification in the sales contract portfolio away from complete dependence on oil.

(b) In the UK, liberalisation of the gas market has led to changes in contract structures. One effect has been to diversify the type of escalators found in gas supply contracts. In addition

to oil, escalation against coal, electricity, general inflation and a range of other price indices can now be found.

US Market

Over the past few years, the gas market in North America has progressed towards becoming a commodity market. Gas prices are generally not based on either cost plus or netback basis, but are fixed as a function of gas-to-gas competition. Any short-term changes in supply and demand are more or less immediately reflected in spot gas prices. Short-term contracts are the rule rather than the exception.

Fully competitive markets through open access have been created for gas trading in the UK and to some extent in USA, Canada and Argentina. Gas competition at the retail level (domestic) exists only in the UK. There are provisions for intervention by central authorities to control gas prices in different sectors of gas market.

Natural gas is priced in terms of MMBTU, i.e., calorific value, in various countries, like USA, UK, France, etc.''

(C) GAS PIPELINE NETWORK IN THE COUNTRY

1.16 Pipeline transport is the most economical way to transport large quantities of oil or natural gas over land. Compared to rail or road it has lower cost per unit and also higher capacity. In the past, the natural gas which was recovered in the course of recovering petroleum could not be profitably sold, and was simply burnt at the oil field (known as flaring). This wasteful practice is now illegal in many countries, especially since it adds green house pollution to the atmosphere. Additionally, companies now recognise that value for the gas may be achieved with LNG, CNG or other transportation methods.

1.17 As the marketing of gas requires development of anchor load consumers and pipeline infrastructures, gas projects are not only capital intensive but also require “lumpy” investments upfront. The Indian gas market is at early stages of development with only one cross country HBJ pipeline catering the large volume of gas transportation to different geographical markets. There are regional pipeline networks but with projected increase in gas supplies, the end use market

development would need to be given a thrust. Similarly, an extensive gas pipeline infrastructure would need to be concurrently developed to connect the gas supply sources to the markets and create a reliable country-wide infrastructure to ensure uninterrupted gas supplies to the market.

1.18 Giving broad details about the transmission infrastructure set up in the country, the Ministry stated as under:-

> "GAIL (India) Ltd. is India's flagship natural gas Company, integrating all aspects of natural gas chain including exploration and production, processing, transmission, distribution and marketing . GAIL has a network of over 5,340 Km. of Natural Gas high pressure trunk pipeline with a capacity to carry about 120 MMSCMD of natural gas across the country. GAIL supplies nearly 68 million cubic metre of natural gas per day to various consumers. Most of the transmission infrastructure is installed in the north west of India for transportation of gas to shore from the western offshore fields and the transmission of this gas to end users. By far the largest of the transmission systems is the HBJ (Hazira-Bijaipur-Jagdishpur) line. This pipeline system (about 2,700 km) transverses the states of Gujarat, Madhya Pradesh, Rajasthan, and Uttar Pradesh, Haryana and Delhi.
>
> In addition to the HBJ pipeline, there also exist regional gas grids of varying sizes, in the states of Gujarat (Cambay Basin), Andhra Pradesh (KG Basin), Assam (Assam-Arakan Basin), Maharashtra (Ex-Uran Terminal), Rajasthan (Jaisalmer Basin), Tamil Nadu (Cauvery Basin) and Tripura (Arakan Basin).
>
> In addition to above, there are some regional pipeline networks by other companies also, such as Assam Gas Company and OIL have pipeline network in Assam. Gujarat State Petronet Ltd. (GSPL) and Gujarat Gas Company Ltd. have pipeline network in Gujarat. Reliance and GSPCL propose to lay high pressure transmission pipeline to monetize their gas in K.G. Basin."

1.19 When the Committee desired to know the details of the existing pipeline infrastructure in the country, the Ministry of Petroleum & Natural Gas, inter alia stated as under:-

> "GAIL's natural gas transmission pipelines, as on 1.3.2007, are as follows:-

NETWORK/REGION	LENGTH (IN KM)
DAHEJ VIJAIPUR PIPELINE	612
HVJ INCLUDING GREP & SPUR LINES	3397
ASSAM	8
TRIPURA	61
GUJRAT AND RAJASTHAN	742
MAHARASHTRA	125
ANDHRA PRADESH	834
TAMILNADU	260
TOTAL	6039

GAIL's LPG Transmission Pipelines, as on 01.03.2007, are as follows:-

NETWORK/REGION	LENGTH (IN KM)
JAMNAGAR - LONI PIPELINE	1304
VIZAG - SECUND. PIPELINE	623
TOTAL	1927

Out of the above, the projects recently completed by GAIL are Dahej – Vijaipur pipeline for evacuation of RLNG from PLL Dahej LNG terminal, Kelaras – Malanpur pipeline to supply gas near Gwalior in Madhya Pradesh (July 2006) Vijaipur –Kota pipeline for supply of natural gas to the customers in Rajasthan Region (Jan 2007) and Jagoti – Pithampur pipeline network for supplying gas to customers in M P region near Indore (March 2007).

IOCL operates a pipeline network of 9,273 km length (Crude oil: 3987 km and Product: 5286 km) having a total capacity of 61.72 MMTPA (Crude oil: 34.50 MMTPA and Product: 27.22 MMTPA). The product pipelines of IOCL are as follows:-–

S. No.	Name of the pipeline	Length (km)	Capacity (MMTPA)
1	GSPL (Guwahati – Siliguri Pipeline)	435	0.82
2	KAPL (Koyali – Ahmedabad Pipeline)	116	1.10
3	KNPL (Koyali-Navagam Pipeline)	78	1.80
4	BKPL (Barauni –Kanpur Pipeline)	745	3.50
5	HBPL (Haldia – Barauni Pipeline)	525	1.25
6	HMRPL (Haldia – Mourigram – Rajbandh Pipeline)	277	1.35
7	MJPL (Mathura – Jalandhar Pipeline)	763	3.70
8	MTPL (Mathura-Tundla Pipeline)	56	1.20
9	PRPL (Panipat – Rewari Product Pipeline)	155	1.50
10	KBPL (Panipat – Bhatinda Pipeline section) *	219	1.50
11.	KSPL (Koyali -- Sanganer Pipeline)	1056	4.10
12.	DTPL – AOD (Digboi – Tinsukia Pipeline)	75	1.00
13.	CTMPL (Chennai – Trichy – Madurai – Product Pipeline)	683	1.80
14.	KDPL (Koyali – Dahej Product Pipeline)	103	2.60
	Product Pipelines (Total)	5286	27.22

Section from Kandla to Panipat converted to crude oil service, which appears at S. No. 3 under Crude Oil pipelines below.

The details of crude oil pipelines of IOCL are as follows:-

S. No.	Name of the pipeline	Length (km)	Capacity (MMTPA)
1	SMPL (Salaya – Mathura Pipeline)	1,870	21.00
2	HBCPL (Haldia – Barauni Crude Oil Pipeline)	943	7.50
3	MPPL (Mundra – Panipat Crude Oil Pipeline)	1174	6.00
	Crude Oil Pipelines (Total)	3,987	34.50
	Total	9,273	61.72

Details of HPCL's existing product pipelines / ongoing producer pipeline projects:

Description	Mumbai Pune Solapur Pipeline	Visakh Vijaywada Secunderabad Pipeline	Mundra Delhi Pipeline Project
Length (Kms)	506	572	1049
Capacity (MMTPA)	4.295	5.38	5.0
Year of commissioning	MPPL – 1985 PSPL – 2006	VVPL – 1998 VSPL - 2002	Completion target – May, 2007

HPCL does not have any LPG Pipelines. Dahej - Uran pipeline (DUPL) network is being constructed for supply of RLNG to customers in Uran, Trombay, Thane- Belapur and Ambevili regions in Maharashtra. Dabhol - Panvel pipeline (DPPL) is being constructed as an extension of DUPL for supply of R-LNG from Dahej to RGPPL, and, later, for evacuation of RLNG from Dabhol LNG terminal and for supply of natural gas from KG Basin to customers in Thal, Pune, Patalganga and Khopoli regions in Maharashtra.

Oil India Limited presently owns and operates a 1,157 km long crude oil trunk pipeline from Duliajan in Assam to Barauni in Bihar to transport crude oil produced by OIL and ONGC in the North East to refineries located at Numaligarh, Guwahati and Bongaigaon. The Barauni-Bongaigoan sector of the pipeline is presently used for reverse pumping of Ravva crude from Barauni to Bangaigaon refinery.

Gujarat State Petronet Limited (GSPL), a subsidiary company of GSPC, is engaged in transmission of gas in Gujarat region only.

GSPCL has an existing pipeline infrastructure of around 1,070 km in the State of Gujarat.

Reliance Gas Transportation Infrastructure Limited (RGTIL) is constructing Kakinada- -Hyderabad- Uran-Ahmedabad pipeline (1385 km long) for transporting gas from the Krishna – Godavari basin to the consumers in Maharashtra & Gujarat.

Oil India Limited is undertaking to lay/commission a 660 km long product pipeline from Numaligarh in Assam to Siliguri in West Bengal to evacuate the petroleum products of Numaligarh Refinery Limited."

1.20 While furnishing the details about the various pipeline projects of private and public players which have been approved by the Government, the Committee have been informed through a written reply as follows:-

"Notifications inviting Expressions of Interest (EOI) have been issued for GAIL laying the following pipelines for transportation of gas to meet the gas demand of customers:-

(1) Jagdishpur – Haldia pipeline
(2) Kochi- Kanjirrkkod- Mangalore / Bangalore Pipeline
(3) Dabhol- Bangalore Pipeline
(4) Dadri-Bawana- Nangal Pipeline
(5) Chainsa-Gurgaon- Jhajjar- Hissar Pipeline

Notification has also been issued inviting EOIs for Reliance Gas Transportation Infrastructure Limited (RGTIL) laying the following natural gas pipelines:-

1. Kakinada-Basudebpur-Howrah Pipeline
2. Chennai-Tuitcorin Pipeline
3. Chennai-Mangalore-Bangalore Pipeline

Letter of authorization for construction of the Vijaywada-Nellore-Chennai Pipeline by RGTIL has been issued on 19 March 2007.

Notifications under Section 3(1) and 6 (1) of the Petroleum & Minerals Pipelines Act, 1962 have been issued for about 1,200 km out of the total1,385 km. long Kakinada-Hyderabad-Uran-Ahmedabad Pipeline of RGTIL.The pipeline will be passing through 4 districts of Gujarat covering 187 km, 7 districts of Andhra Pradesh covering 563 km., 1 district of Karnataka covering 68 km. and 7 districts of Maharashtra covering 567 km.

> Oil India Limited is undertaking to lay/commission a 660 km long product pipeline from Numaligarh in Assam to Siliguri in West Bengal to evacuate the petroleum products of Numaligarh Refinery Limited.
>
> Notification has been issued inviting EOIs for GSPCL laying Kakinada-Ahmedabad pipeline. The pipeline will be passing via Vijaywada, Dindigal, Nagpur and Bhopal.
>
> Application for grant of authorization for laying, building, operating and expanding common carrier natural gas pipelines in the State of Andhra Pradesh has been received from M/s Krishna Godavari Gas Network Limited, Andhra Pradesh. Request has also been received from M/s Reliance Fuel Resources Limited for grant of authorization to build a natural gas pipeline from Kakinada, Andhra Pradesh to Dadri, Uttar Pradesh. Certain information has been sought pertaining to these projects."

1.21 During the examination of the subject 'Exploration of Oil and Natural Gas including Coal Bed Methane', the Committee had expressed concern that a number of fertilizer units had been closed down or rendered unviable because of increasing cost of naphtha. In the relevant Report, they had desired that while laying the future gas pipelines, the Government should take into account the locations of such units so as to facilitate their linking to the pipeline network. This issue was also raised during oral evidence on the subject under examination.

1.22 Regarding switching over of fertilizer units into gas based plants, the Secretary, Ministry of Petroleum & Natural Gas mentioned during oral evidence as under:-

> "….. fertilizer units have been, in fact, one of our areas of interest. There are more than 35 fertilizer units which are producing different types of fertilizers like potash, phosphate, nitrates and so on. As on today, we are able to cover about 60 per cent of the units, namely 22 million cubic metre per day we are supplying. The shortfall is about 18 to 19 million cubic metre. In addition, we have made a complete study. If we were to cover all the fertilizer units completely with gas, that is enabling the present units which are partly getting gas to fully utilize gas, enabling the present naphtha-based units, how much will be required, on that we have already made an assessment. We are already in the process of providing

connectivity. Gas Authority of India Limited is in the process of doing the pipeline grid blue print……. on the 9th of next month we are having a meeting of the committee which I Chair. At the Fertilizer Ministry's behest, we agreed to chair the committee because we are going to establish connectivity and we are going to tie up gas. An additional 19 million cubic metre of gas will be needed in order to help all present units to enhance their capacity utilization fully to gas…… By 2010, all the fertilizer units in this country will operate only on gas. This is the target we have in mind for that. It is a very ambitious programme, but we will be able to do it."

(D) GAS PIPELINE POLICY

1.23 In order to provide a policy framework for the future growth of pipeline infrastructure in the country, the Government has notified the 'Policy for Development of Natural Gas Pipelines and City or Local Natural Gas Distribution Networks' on 20 December 2006. The Policy has come into effect from its date of publication in the Gazette of India on 22 December 2006.

1.24 The salient features of the Policy are as follows:-

1. All the natural gas and city or local distribution pipelines will be laid in accordance with the authorization granted by the Regulatory Board under a transparent mechanism. Dedicated pipelines, laid to supply gas to specific consumers originating from regulated pipelines, will not require the authorization.
2. Regulator shall develop a comprehensive set of technical and safety standards as well as a code for grid connectivity.
3. Progressive unbundling of common carrier transmission activity and gas marketing activity.
4. The designed pipeline capacity to be at least 33 per cent more than the maximum capacity requirement of the proposer and those who tie up for capacity. Such capacity would be made available on an 'open access and non-discriminatory basis' at transportation rates laid down by the Board.

5. The Board may consider different exclusivity periods for setting up of City gas distribution networks and for marketing of gas by the entity developing such networks.
6. Authorization to the proposer may be cancelled with forfeiture of his security deposit, if the conditions of the authorization are not adhered to or the project is delayed beyond the stipulated milestone(s).
7. Once the project is commissioned, the bid bond would convert into a performance bond and would provide the guarantee for satisfactory compliance of the conditions stated in the authorization during the life of the project.
8. The transportation tariff for the transmission pipeline and city or local natural gas distribution network, as also the manner of determining such tariff, will be laid down by the Board.
9. The Government may prepare long term perspective plan for creating gas pipeline network in consultation with the Board, State Governments, Oil and Gas Industry, Gas consuming Industries and other stakeholders. The Plan will be kept in view while authorizing / approving new pipelines.
10. A Gas Advisory Board (GAB) shall be constituted by the Government to advise the Government on all matters relating to this policy. The advice of GAB shall not be binding on the Government.
11. To complement and supplement the domestic investment, FDI upto 100% is permitted in laying natural gas pipelines under the automatic approval route.
12. State Governments are required to ensure various statutory and other clearances on a fast track basis.
13. State Governments shall prepare their plans for developing the city or local gas distribution networks, prioritizing the cities or local areas.

1.25 Conceptually, a National Gas Grid is a network of inter-connected natural gas transmission pipelines, providing linkage of the various supply sources to the markets in different parts of the country. Such a network of transmission

pipelines evolves with the development of supply sources and gas markets. The Gas Grid would evolve with the inclusion of new projects from time to time, depending on the availability of gas and its demand.

1.26 The Pipeline Policy envisages gas grid connectivity with a view to harmonizing the operations and to provide inter-connectivity to different gas pipelines. For the development of gas sector in India, including establishment of Gas Grid with open market access for all players on a non-discriminatory basis, a comprehensive set of technical requirements and safety standards, as well as a code for gas grid connectivity, would be developed by the Board. This would ensure operational compatibility between different gas pipelines.

1.27 'Policy for Development of Natural Gas Pipelines and City or Local Natural Gas Distribution Networks' is applicable to natural gas pipelines and city or natural gas distribution networks, except for dedicated pipelines laid to supply gas to specific consumers, provided the same are for their own use and not for resale.

1.28 With regard to determination of the transportation tariff, the Pipeline Policy provides that transportation tariffs of common/ contract carrier transmission pipelines and city/local natural gas distribution networks, as also the manner of determining such tariffs, will be laid down by Petroleum & Natural Gas Regulatory Board (PNGRB), as per the provisions under the PNGRB Act and the regulations. Section 22 of the Petroleum & Natural Gas Regulatory Act, 2006, inter alia, stipulates that the transportation tariff rates for common/contract carrier and city/local natural gas distribution networks shall be regulated by the Board.

1.29 It has been informed that the 'Policy for Development of Natural Gas Pipelines and City or Local Natural Gas Distribution Networks' provides for a "Gas Advisory Body" (GAB) for giving advice to the Central Government on the the various aspects of promoting and developing gas pipeline network and city / local gas distribution networks in the country. The Secretary, Ministry of Petroleum and Natural Gas (MOP&NG) shall be the Chairman of GAB and will

comprise representatives from the major gas consuming Ministries/Departments, State Governments, oil and gas industry, consumer organisations and industrial chambers/associations/expert bodies. The MOP&NG may, from time to time, notify the constitution of the GAB. However, the advice of the GAB shall not be binding on the Central Government. It has also been informed that the constitution of GAB will be considered only after the PNGRB starts functioning.

1.30 The Committee find that the Petroleum and Natural Gas Regulatory Board (PNGRB) Act, 2006 has been notified in the Gazette of India on 3.4.2006 as Act No. 19 of 2006 for setting up the Petroleum & Natural Gas Regulatory Board. Regarding the constitution of the board, the Committee have been informed that the complete proposal for the same has already been sent on the basis of the recommendations made by the Search Committee to the Cabinet Secretariat for obtaining the approval of ACC and the Board will be put in place as soon as the necessary approval is granted.

1.31 The Petroleum and Natural Gas Regulatory Board has been established w.e.f. 25.6.2007.

CHAPTER-II

GAS AS FUEL – ITS DIFFERENT FORMS

(A) COMPRESSED NATURAL GAS (CNG)

When Natural Gas, a mixture of hydrocarbons consisting mainly of Methane (88% to 90%) is compressed through the compressor system to a pressure of 250 bars, it is termed as "Compressed Natural Gas" (CNG). CNG is stored in tanks of cascades (3,000 litre capacity each) at the stations. The CNG is dispensed to automobile users through dispenser systems at a pressure of 200 bars.

2.2 CNG is a colourless, odourless and non-toxic fuel. So Mercaptin is mixed at the intake station to detect any leakage. Though CNG is inflammable, as it is lighter than air, it easily disperses in open air conditions. CNG is also called Green Fuel, because it is free from lead and sulphur.

2.3 Explaining the various advantages of CNG as a fuel, the Ministry , in a written reply, inter alia furnished as under:

> "Economics:
>
> On an energy-equivalent basis, natural gas costs considerably less than the alternatives of LPG, petrol and diesel. However, certain fiscal support is always required from Government for introduction and promotion of changeover / conversions. Natural gas is a clean-burning fuel that reduces vehicle maintenance. Natural gas, unlike liquid fuels, cannot be siphoned from a vehicle. Fuel theft is an on-going concern of commercial operators, using petrol and diesel.
>
> Emissions:
>
> Exhaust emissions from CNG vehicles are much lower than those from petrol/diesel powered vehicles. For instance, compared to petrol/diesel powered vehicles, CNG emissions of carbon monoxide are approximately 70% lower, non-methane organic gas emissions

are 89% lower, and oxides of nitrogen emissions are 87% lower. In addition, CNG also emits significantly lower amounts of greenhouse gases and toxins.

Safety:

Vehicles, that run on clean burning natural gas, are as safe as vehicles operating on traditional fuels, such as petrol and diesel. Compressed natural gas, unlike gasoline, dissipates into the atmosphere in the event of an accident. Petrol pools/accumulates on the ground which creates a fire hazard. "

2.4 There are two fundamental reasons for the excellent safety record of CNG vehicles. They are the structural integrity of the CNG vehicle fuel system and the physical qualities of natural gas as a fuel. CNG fuel systems are "sealed," which prevents any spills or evaporative losses. Even if a leak were to occur in a CNG fuel system, the natural gas would dissipate into the atmosphere because it is lighter than air.

CNG Infrastructure

2.5 In recent years use of natural gas for the automotive sector has gained importance as a way to reduce the chronic vehicular pollution in big cities. Mahanagar Gas Ltd. (MGL) in Mumbai and Indraprastha Gas Ltd. (IGL) in Delhi are engaged in developing CNG infrastructure in these metros. In Mumbai, more than 1,76,000 vehicles are running on CNG mostly three-wheelers, cars, taxies and few buses. In Delhi, IGL is catering to the needs of over 1,25,000 vehicles of different categories. Delhi has gained the distinction of having one of the world's largest fleet of more than 17,000 buses on CNG.

2.6 As per the data furnished by the Ministry of Petroleum & Natural Gas, the estimated CNG vehicles on the roads in Delhi & Mumbai are as follows:-

"S.No	Name of City	Type of vehicle	No. of Vehicles (Approx.)	Expected increase during next five years
1.	Mumbai	Bus	561	With regard to heavy vehicles, viz., buses, trucks and LCVs, it is expected that there would be three to four fold increase in the next 5 years.
		Taxis/Pvt. Cars	51300	
		Autos	122200	
		Trucks	800	
		LCVs	1400	
		Total	1,76,261	
2.	Delhi	Bus	17059	The number is expected to reach 2,50,000 in the next 5 years, with cars accounting for around half of that number."
		Taxis/Pvt. Cars	40488	
		Autos	67590	
		Total	1,25,137	

2.7 The status of CNG infrastructure in different cities, as per the information provided by the Ministry, are as follows:-

"S.No.	City	State	Companies	Status of CNG supply
1.	Mumbai	Maharashtra	Mahanagar Gas Limited	120 CNG Stations
2.	Delhi	Delhi	Indraprastha Gas Limited	146 stations
3.	Vijayawada	Andhra Pradesh	Bhagyanagar Gas Limited	04 CNG Stations
4.	Agartala	Tripura	Tripura Natural Gas Company Limited	1st CNG Station likely to be commissioned in June 2006
5.	Kanpur	Uttar Pradesh	Central U P Gas Limited	1 CNG Station
6.	Lucknow & Agra	Uttar Pradesh	Green Gas Limited	Lucknow – 1 CNG Station Agra – 1 CNG Station commissioned
7.	Vadodara	Gujarat	GAIL	02 CNG Station

Apart from the above, a few CNG stations have been opened in Gujarat by private companies i.e. GGCL and Adani."

2.8 The Committee have been informed that as on 28 February 2007, in the National Capital Region, Indraprasta Gas Ltd.(IGL) has set up 146 CNG stations. When asked whether the CNG infrastructure in Delhi and Mumbai is adequate to cater to the increasing requirements, the Ministry stated:-

"As on 1st November 2006, IGL has a compression capacity of 19.08 lakh kgs/Day and the average sale /day is 9.08 lakh kgs/day.

The peak load has reached 10.92 lakh kgs/day. Also subsequent to the notification by Government of NCT of Delhi, the LCVs (more than 3.5 tonnes) are expected to join the CNG population. Taking peak load into account, it would on a conservative estimate, translate to required compression capacity of more than 22 lakh kgs/day. To increase compression capacity, the number of stations have to be increased to around 250 by 31st March 2008.

In Mumbai, Thane and Mira Road Mahanagar Gas Ltd.(MGL) is presently operating 122 CNG stations with 610 dispensing points. The total installed compression capacity of MGL is over 15 lac kgs per day. The current average daily sales is 6.8 lakh kgs, resulting in utilisation of about 50%. MGL has made plans to increase the stations to 140 by mid 2007, subject to timely approvals, availability of sites and site readiness by Oil Marketing Companies."

Conversion of vehicles to CNG mode

2.9 A vehicle can be converted to CNG fuel mode by retro-fitting it with an authorized CNG conversion kit. Agencies, like ARAI and VRDE, conduct tests as per their guidelines and approve the various CNG conversion kits. Once these CNG conversion kits are approved, the manufacturers/distributors get it further approved from the Transport department of the particular state where the conversions are to be carried out. Once the kits are approved, the fitment can be done only at workshops approved by State Transport Department. As on date, there are quite a few agencies who retro-fit cars with CNG kits and approvals are available for all the popular variants of cars.

2.10 As regards the other categories, viz., three-wheelers and buses, the same are now available in factory-fitted models. OEM's, like TATA and Swaraj Mazda, have introduced factory-fitted models in the market.

2.11 The Committee were informed that the cost of each kit varies from Rs.35,000 to Rs.50,000, depending upon the make, type, capacity of cylinder, etc.

2.12 When the Committee wanted to know how the Government is encouraging the conversion of private vehicles from petrol mode to CNG, the Ministry furnished the following:-

> "To promote the use of CNG by converting existing heavy commercial, taxies and private vehicles into CNG mode, the Government is emphasizing to keep the cost of CNG lower than the other fuel like Petrol and Diesel. CNG currently costs approximately 66% cheaper than petrol and 40% cheaper than diesel in Delhi. The State Government of Tripura is encouraging by means of participation in workshops, authorization. U.P. State Transport Authority has been taking steps for conversion of vehicles to CNG mode in a phased manner. Up to March'2007, we have about 3354 CNG Vehicles in Lucknow City and about 2,704 CNG Vehicles in Agra City.
>
> The number of CNG vehicles in the country are on an increasing trend. The Government has been promoting CNG as a preferred fuel for vehicles to reduce the pollution in various cities. The Government has been encouraging public and private corporate to develop infrastructure and implement City Gas Distribution Projects in various parts of the country. Development of adequate CNG infrastructure in the country would encourage conversion of private vehicles from petrol to CNG."

(B) PIPED NATURAL GAS (PNG)

2.13 Piped Natural Gas (PNG) is the natural gas which is being supplied at the domestic user point from 4 bars to 21 millibars. As per the current prices for domestic consumers, PNG is 14% cheaper than LPG. It is user friendly, safe to operate and convenient to handle.

2.14 When the Committee desired to know the specific advantages of PNG, the Ministry, in a written reply informed as below:-

- "Compared to Liquefied Petroleum Gas (LPG), PNG is supplied to the users through pipelines, thereby ensuring continuous and adequate supply at all times without any storage problems.
- PNG gives a cost advantage of 10%(vis-à-vis LPG) to the domestic consumers. Further, the user pays the gas consumption charges based on the exact consumption reading in the meter installed at the user's premises.

- The use of PNG enables the user to derive the desired amount of heat instantly and to use it for multiple purposes, i.e. space heating, water heating, etc and to use it to run various electrical appliances, like A/C, geyser, lanterns, etc.
- The system design is tamper-proof, thus ensuring total safety. In case of any tampering, the system automatically shuts down, thereby avoiding any accident.
- PNG, being lighter than air, disperses in air and does not accumulate like LPG does; thereby not posing any threat or danger.
- In case of fire, the supply in PNG can be cut-off through valves provided in the pipelines (inside and outside the kitchen).
- Natural Gas ensures less emission of pollutants and is the most environment-friendly fuel."

PNG Pipelines

2.15 The present status of PNG supply to bulk, commercial and house holds by the JVCs of GAIL as furnished by the Ministry of Petroleum & Natural Gas in a reply is as follows:-

"Sl. No.	Name of City	Name of JVC	No. of PNG Connections (as in October 2006)	
1.	Delhi	Indraprastha Gas Limited (IGL)	Type	No. of Connections
			Households	57101
			Commercial	282
			Industrial	0
			Total	57383
2.	Mumbai	Mahanagar Gas Limited	Type	No. of Connections
			Households	271355
			Commercial	790
			Industrial	40
			Total	272185
3.	Agartala	Tripura Natural Gas Company Limited (TNGCL)	Type	No. of Connections
			Households	6100
			Commercial	110
			Industrial	11
			Total	6211"

2.16 When the Committee wanted to know the difficulties being faced in laying PNG pipelines and steps taken to co-ordinate with builders/town planners to build gas infrastructure, the Ministry stated:-

> "PNG pipelines are laid within the city by the City Gas Distribution Companies, who are doing business of supply of CNG and PNG. Hindrances, like non issuance of permissions, delay in issuance of permissions/ approvals, resistance by other utility service providers, damage to the pipelines by other utility service providers, etc. are normally faced in the laying of the PNG and CNG pipeline within the city. The companies often face difficulty in laying down pipelines owing to multiplicity of agencies from which permissions need to be taken.
>
> Private builders, who approach City Gas Distribution Companies for PNG supply during the planning stage of their projects, are offered suitable advice on gas pipeline infrastructure required in their projects."

Pricing

2.17 The prices are decided by the City gas distribution companies, who are doing the business of supply of CNG and PNG in the cities. The normal procedure is that they calculate the cost of production of CNG and PNG, which includes gas cost (including transportation tariff), taxes on the gas received, O&M cost, depreciation, interest on loan, insurance cost, overheads, etc, various duties, such as excise duty, cess on excise duty and sales tax are added to arrive at the selling price.

2.18 The selling prices of CNG and PNG in Delhi and Mumbai as furnished in a reply by the Ministry of Petroleum & Natural Gas are as follows:-

"Sl. N0.	Consumer sectors	Unit	Delhi (IGL)	Mumbai (MGL)
1.	Automotive sector	Rs./ Kg	19.20	22.06
2.	Domestic sector	Rs./ SCM	13 + 4% VAT	11.82
3.	Small commercial	Rs./ SCM	17.79 + 4% VAT	15 – 20 (depending upon the consumption pattern)
4.	Medium commercial	Rs./ SCM	20.83 + 4% VAT (for consumption up to 2100 SCM/Day	
5.	Large Commercial	Rs./ SCM	12.23 + 4% VAT (for consumption above 2100 SCM/Day	
6.	Industrial sector	Rs./ SCM	-	09.00

The various taxes and duties that go into the prices are as follows:-

i. Sales tax on the gas supplied by supplier to city gas companies.
ii. Octroi
iii. State Development tax
iv. Excise duty
v. Cess on Excise duty

However, this varies from State to State. In some States sales tax has been waived off, while in some other States additional taxes are levied."

2.19 When asked about the reasons for charging lower rates for large commercial consumers in Delhi vis-à-vis small and medium commercial consumers, the Ministry, in a written reply, furnished the following details:-

"The PNG consumers of Indraprastha Gas Limited have been categorized as follows:-

a) Domestic PNG Consumer –

The price of PNG is indexed to the administered retail selling price of domestic LPG (14.2 Kg) cylinder in the National Capital Territory of Delhi, as applicable from time to time, taking into account the respective heating values of natural gas & LPG.

The current price of domestic PNG consumers is Rs.13.00 per scm + 4 % VAT.

b) Small Commercial Consumer –

Small Commercials (Restaurants etc.) are PNG users replacing single fuel, i.e., Commercial LPG.

The delivered price of PNG is indexed to commercial LPG (19 kg) cylinder in the N.C.T. of Delhi, as applicable from time to time, taking into account the respective heating values of natural gas and LPG.

The current price of PNG for small commercial consumers is Rs.17.79/SCM + 4 % VAT.

c) Large Commercial Consumer –

Large Commercials (Big Hotels etc.) are PNG users replacing Multi fuel i.e. LDO and Bulk LPG.

The delivered price of PNG for large commercial consumer is indexed to the weighted average price of LDO and LPG (Bulk) in National Capital Territory of Delhi, as applicable from time to time, taking into account the respective heating values of natural gas, LPG and LDO.

For Large Commercials two rates were applicable upto 15.03.07 on consumption volume basis i.e.

-- Upto 2100 SCM @ Rs. 20.83 SCM + 4% VAT (Rs. 21.66/SCM)

For large commercial consumers above 2100 SCMD, the price earlier was Rs.12.23 + 4 % VAT. However, this preferential rate has been withdrawn with effect from 15 March 2007.

The differential rate mentioned above for large commercials was derived for gas use in VAM machines for air conditioning on the basis of cost of electricity consumed for equivalent effect of air conditioning."

Customer Care

2.20 The Committee have been informed that in Delhi, to deal with PNG customer complaints, IGL has set up a 24 - hour customer care phone-line, where PNG customers can register any request/grievance giving necessary details. The call centre executives forward the computerized request/grievance to the concerned official for resolution, which is then resolved within the specified time-frame and the customer is informed accordingly.

2.21 In Mumbai, the Company has set up a dedicated in-house call centre to provide a 'single window' to consumers for redressal of their complaints and to resolve their queries. The consumers have been provided an easily accessible 4 digit helpline number 1917. The Company is maintaining a 24 x 7 emergency service at various strategic locations to enable emergency calls to be attended expeditiously.

City Gas Projects

2.22 Furnishing the details and the present status of the various city gas projects taken up/being taken up/proposed to be taken up by various public/private/joint venture companies in the country, the Ministry of Petroleum & Natural Gas, stated as under:-

> "GAIL has so far formed eight Joint Venture Companies for implementation of City Gas Distribution Projects in various states / cities. The details of the Joint Venture Companies are as given below:-

SL. NO	NAME OF JVC	YEAR OF INCORPO-RATION	AREA OF OPERATIONS	EQUITY STRUCTURE	INFRASTRUCTURE DETAILS		GAS ALLOCATION (MMSCMD)
					CITY	CNG STN.	
1	Mahanagar Gas Limited	08.03.1995	Mumbai, Mira-Bhayender, Navi-Mumbai & Thane	GAIL: 35% BG : 35% Maharashtra Govt.: 10% Public : 20%	Mumbai	114	1.4 for Mumbai 0.5 for Navi Mumbai & Thane
					Thane	6	
					Mira Bhayender	2	
2	Indraprastha Gas Limited	23.12.1998	Delhi	GAIL:22.5% BPCL:22.5% Govt of NCT of Delhi: 5% FIs / Public: 50%	Delhi	144	2.0 for Delhi 0.7 for Gurgaon, NOIDA, Faridabad
3	Bhagyanagar Gas Limited	22.08.2003	Andhra – Pradesh	GAIL:22.5% HPCL:22.5% State Govt. (or its nominee): 5% FIs / Public: 50%	Hyderabad	1	0.1 (Andhra Pradesh)
					Vijayawada	4	
4	Tripura Natural Gas Company Limited	10.07.1990 GAIL had taken 29% equity on 10.06.2005	Tripura	GAIL : 29% TIDC:10% AGCL:10% Public/FI/ Others:51%	Agartala	1	0.13
5	Central U P Gas Limited	25.02.2005	Kanpur, Bareilly & Cities of Eastern U.P.	GAIL:22.5% BPCL:22.5% State Govt (or its nominee): 5%, FIs / Public: 50%	Kanpur	2	0.1
6	Green Gas Limited	07.10.2005	Lucknow, Agra, Cities of Western U.P. & Uttaranchal	GAIL:22.5% IOCL:22.5% State Govt (or its nominee): 5%, FIs / Public: 50%	Lucknow	2	0.1
					Agra	1	-
7	Maharashtra Natural Gas Limited	13.01.2006	Maharastra except Mumbai, Thane and Navi Mumbai	GAIL:22.5% BPCL:22.5% State Govt (or its nominee): 5%, FIs / Public: 50%	Pune	1st CNG station by 2007	0.4
8	Aavantika Gas Limited	07.06.2006	Madhya Pradesh	GAIL: 22.5% HPCL: 22.5% State Govt (or its nominee): 5%, FIs / Public: 50%	Indore	1st CNG station by 2007	_

Besides, other organization, like Hindustan Petroleum Corporation Ltd., Gujarat Gas Corporation Limited and Tripura Natural Gas Corporation Limited are also supplying CNG/PNG in various areas of Gujarat, Assam & Tripura."

2.23 As regards further expansion, GAIL has identified 28 cities for implementation of City Gas Distribution Project. The cities have been identified on the basis of air polluted cities identified by Hon'ble Supreme Court (13 cities) and other cities close to GAIL pipeline network(15 cities). The 13 cities identified by Hon'ble Supreme Court are Agra, Lucknow, Kanpur, Varanasi, Pune, Faridabad, Patna, Ahmedabad, Sholapur, Hyderabad, Bangalore, Kolkata and Chennai. The 15 cities close to GAIL's pipeline network are Allahabad, Bareilly, Jhansi, Mathura, Noida, Navi Mumbai, Gwalior, Indore, Ujjain, Rajamundry, Vijayawada, Rajkot, Surendranangar, Kota and Vadodara.

2.24 In reply to a query, the Ministry informed that out of the 13 cities identified by Hon'ble Supreme Court, Joint Venture Companies have already been established by GAIL to implement City Gas distribution projects in Agra, Lucknow, Kanpur, Pune and Hyderabad.

2.25 The Ministry further informed that efforts are being made by GAIL to form Joint Venture Companies for implementation of City Gas distribution projects in the remaining cities and the process of forming of JVs is under progress. The status of forming JVs is as follows:-

"1) MoU has been signed with BPCL for the cities of Karnataka, which includes Bangalore city.

2) MoU with IOCL for Kolkata, including other cities of West Bengal, is under progress."

2.26 Besides GAIL, the following organisations are also implementing City Gas projects in the following cities:-

1. Adani Energy Limited for Ahmedabad.
2. Hindustan Petroleum Corporation Limited for Ahmedabad.

3. Gujarat Gas Limited for Surat, Bharuch, Ankleshwar.
4. Assam Gas Company Limited for Duliajan, Nazira, Sibsagar, Moran and other cities of Assam (PNG only)
5. Municipal Corporation, Vadodara (PNG only)
6. GSPC Gas Company Limited for Hazira, Surat and Gandhinagar.

(C) LIQUEFIED NATURAL GAS(LNG)

2.27 Liquefied Natural Gas or LNG is Natural Gas which is liquefied at (-) 160 degrees Centigrade in atmospheric pressure. This is done for easy storage and transportation since it reduces the volume occupied by gas by a factor of 600. This is because most of the heavier hydrocarbons are removed during liquefaction. LNG is transported in specially built ships with cryogenic tanks. It is received at the LNG receiving terminals and is regassified to be supplied as natural gas to the consumers. LNG projects are highly capital intensive in nature. The whole process consists of five elements:-

1. Dedicated gas field development and production.
2. Liquefaction plant.
3. Transportation in special vessels.
4. Re-gassification Plant.
5. Transportation & distribution to the Gas consumer.

2.28 The LNG trade started in mid 1960's and has increased rapidly. In 1992 it was around 80 Billion Cubic Metres (BCM) per annum and crossed the 100 BCM mark in 1996. World trade in LNG is currently in the range of 150 BCM. The major exporting countries of LNG are Algeria, Qatar, Indonesia, Malaysia, Australia, whereas, the major importers are Japan, South Korea, Taiwan and Western Europe.

2.29 Geographically, India is very strategically located and is flanked by large gas reserves on both the east and west. India is relatively close to four of the world's top five countries in terms of proven gas reserves, viz. Iran, Qatar, Saudi

Arabia and Abu Dhabi. The large natural gas market of India is a major attraction to the LNG exporting countries. In order to encourage gas imports, the Government of India has kept import of LNG under Open General License (OGL) category and has permitted 100% FDI.

2.30 On a query regarding global LNG market and pricing of LNG, the Ministry stated the following:-

> "For the year 2005, 188.81 billion cubic metres of LNG was traded worldwide. Japan imported 40% of this volume, followed by South Korea importing 16%. The major suppliers of LNG are Indonesia, Malaysia, Qatar and Algeria; they account for 60% of the global LNG supplies. India imported about 5 MMT of LNG during the year 2005-06 at Petronet LNG's (PLL) Dahej LNG Terminal. In addition, M/s. Shell Hazira imported some cargos of LNG for its 2.5 MMTPA LNG terminal at Hazira during 2005-06.
>
> For Asia Pacific market, the LNG price is linked with Japanese basket of crude oil averaged at USD 6.05/ MMBTU. For the European Union, the average supply price of LNG was USD 6.28/MMBTU."

Availability of LNG in the Country

2.31 When the Committee desired to know the present availability of LNG in the country and the progress made in the direction of procuring LNG, the Ministry of Petroleum & Natural Gas furnished the following reply:-

> "M/s. Petronet LNG Ltd.(PLL), a Joint Venture Company promoted by IOC, BPCL, ONGC and GAIL, has set up country's first 5 MMTPA (18 MMSCMD) LNG terminal at Dahej, Gujarat. PLL has a long term Sale Purchase Agreement (SPA) with RasGas of Qatar for importing 5 MMTPA of LNG. In addition, PLL has also imported some cargoes from spot market.
>
> M/s. Shell Hazira has also set up 2.5 MMTPA LNG Terminal at Hazira, Gujarat in April 2005. However, due to high international price of LNG, Shell has imported only a few spot cargoes totaling 0.171 MMT.
>
> M/s. PLL has signed contract with RasGas Qatar for import of 7.5 MMTPA LNG for a period of 25 years. RasGas Qatar is already

supplying 5 MMTPA LNG and the supply of balance 2.5 MMTPA LNG would commence from the year 2009.

GAIL, IOC and BPCL have signed contracts with National Iranian Gas Export Company (NIGEC) on 13 June 2005 for import of 5 MMTPA LNG, which is scheduled to commence from 2009. Simultaneously, the parties also signed a side letter to the LNG SPA, as per which NIGEC had to obtain the approval of their parent company, National Iranian Oil Company (NIOC), for the SPA to become effective. NIGEC has not been able to obtain NIOC's Board approval till now. The matter is being pursued with the Iranian authorities. Minister (P&NG) discussed this matter with Iranian President in Shanghai when he met him on 15.06.2006 in Shanghai on the sidelines of Shanghai Cooperation Organization (SCO) Conference. This was subsequently followed up through D.O. letter dated 7 July 2006 to Iranian Minister of Petroleum and letter in August 2006 to the President of Iran. The Foreign Minister of Iran discussed the issue with Minister (P&NG) during his visit to India on 17 November 2006.

PLL is setting up 2.5 MMTPA LNG Terminal, with a provision for expansion to 5 MMTPA, at Kochi. PLL is at advanced stage of negotiations with Gorgon Australia for import of 2.5 MMTPA LNG for Kochi LNG Terminal. GAIL and PLL are holding discussions with various potential suppliers of LNG on long-term basis for the year 2009 onwards for Dabhol LNG Terminal."

2.32 Regarding capacity utilization of LNG terminals of Shell (Hazira) and PLL (Dahej), the Ministry informed :-

"PLL's Dahej LNG Terminal with a capacity of 5.0 MMTPA and Shell's Hazira LNG Terminal with 2.5 MMTPA capacity are in operation in the country. Dahej Terminal is operating at optimal capacity. In addition to the import of 5 MMTPA LNG from Qatar, PLL has also imported some cargoes of LNG from the spot market. PLL's LNG terminal is operating at about 110% capacity.

2.5 MMTPA LNG Terminal of Shell Hazira is not operating at its optimal capacity on account of high spot LNG prices in the international market. Shell Hazira LNG Pvt. Ltd. has imported only 0.171 MMT in the year 2005-06, which is about 6.8% of the installed capacity of the terminal."

2.33 Furnishing the details of the LNG terminals that are being planned by PSUs/Private/Joint Ventures under construction and the quantum of LNG proposed to be brought into the country in the next 10 years, the Ministry, stated as under:-

"LNG Terminals under construction

		Expected Date of commissioning
Dabhol	5.0 MMTPA	April 2010
Dahej Expansion	5.0 MMTPA	2008-09
Kochi	5.0 MMTPA	2011

IOC and ONGC are also planning to set up an LNG terminal at Ennore, Tamilnadu and Mangalore, Karnataka respectively. They are holding discussions with prospective suppliers of LNG to tie up LNG for their projects. However, LNG for these projects has yet to be tied up."

2.34 The quantum of LNG proposed to be brought into the country in the next 10 years, as per the details furnished by the Ministry, is as under:

"(i) 5 MMTPA (18 MMSCMD) LNG is being received by PLL from RasGas Qatar. Contract period is for 25 years, i.e. 2004-2029.

(ii) Apart from this, 2.5 MMTPA (9 MMSCMD) LNG will be available for PLL for Dahej expansion project from 2009. The period contract is for 25 years, i.e. 2009-2034.

(iii) GAIL, IOCL and BPCL have signed Sale Purchase Agreement (SPA) with NIGEC, Iran for supply of 5 MMTPA (18 MMSCMD) LNG from 2009. The contract is for 25 years, i.e. from 2009-2034. This is to subject to clearance of National Iranian Oil Company (NIOC).

(iv) PLL is at advanced stage of discussion with Gorgon LNG Australia for supply of 2.5 MMTPA (9 MMSCMD) of LNG for Kochi LNG Terminal.

(v) GAIL has to source 5 MMTPA (18 MMSCMD) of LNG for the Dabhol Power project. Discussions with Sonatrach, Algeria are at an advanced stage for supply of 1.2 MMTPA of LNG

from 2009. Further, discussions are being held with all possible sources of supply.

(vi) For their 2.5 MMTPA (9 MMSCMD) terminal, Shell is sourcing LNG from the spot market.

The LNG terminals expected to be commissioned, as mentioned above, would have a total capacity of 23.75 MMTPA. If they work at optimum capacity, it would translate to an average supply of 83.12 MMSCMD."

2.35 Regarding the latest status of construction of LNG terminal at Kochi, the Committee have been told as under:-

"Petronet LNG Limited (PLL), which is constructing Kochi LNG terminal, has informed that it is currently evaluating bids for lump sum turnkey contract for Engineering, Procurement and Construction (EP&C) of Kochi LNG terminal. Bids of three short-listed bidders are being evaluated. The contract is likely to be awarded by June 2007. The terminal is expected to be commissioned in June 2010."

LNG Policy

2.36 The Committee were informed that the Ministry of Petroleum and Natural Gas had proposed to formulate an Integrated LNG Policy, which had the following three components:

(i) A regulatory framework for LNG sector,

(ii) Policy relating to LNG Shipping, and

(iii) Fiscal concessions.

2.37 The Ministry has given the following details on the above three components:-

"The Government has notified Petroleum and Natural Gas Regulatory Board (PNGRB) Act, 2006 on 3 April 2006. Clause (za) of Section 2 of the Act clarifies that 'natural gas' includes, inter alia LNG and R-LNG. So the regulatory framework for LNG sector has been put in place.

The issues relating to LNG shipping are being taken up separately by the Ministry of Shipping.

In the Annual Budget 2003-04, customs duty on capital goods for LNG terminals was reduced from 25% to 5%. Ministry of Petroleum & Natural Gas has raised some other proposals pertaining to the LNG sector with Ministry of Finance, viz (i) 'Declared goods' status to Natural Gas under the Central Sales Tax Act, 1956, (ii)Zero per-cent duty on import of LNG instead of 5%, (iii) Zero per-cent custom duty on capital goods for LNG and (v) 'Infrastructure status' for LNG projects under Income Tax Act, 1961. The Ministry of Petroleum & Natural Gas is discussing these proposals with the Ministry of Finance."

2.38 The Committee enquired if there is proposal to grant waiver of customs duty on LNG, re-gasified LNG and natural gas and grant the status of 'declared goods', the Ministry, inter alia, replied as under:-

"…… the Department of Power has submitted a note for consideration of Cabinet seeking waiver of customs duty on LNG for Power sector and status of 'declared goods' for LNG/RLNG/Natural Gas in line with coal. Government constituted a Group of Ministers to consider the proposal. Ministry of Power had submitted for consideration of GOM the following proposals:-

(i) Grant of complete waiver of customs duty on Liquefied Natural Gas (LNG)/ Re-Gasified Liquefied Natural Gas (RLNG)/ Natural Gas from the existing rate of 5%.

(ii) In-principle approval for granting the status of "declared goods" to LNG/ RLNG/ Natural Gas to enable the Ministry of Finance to seek the approval of Empowered Committee of State Finance Ministers (EC) on the issue."

CHAPTER III

TRANSNATIONAL GAS PIPELINES

India has been exploring the option of Transnational Pipelines in view of its rising energy needs. Moreover, India is strategically located to meet its natural gas requirements through transnational pipelines as it is flanked by large gas reserves to its East, North-West and West. These sources include the world's leading supply sources in terms of proven gas reserves in Central Asia, West Asia including Iran and Myanmar and Bangladesh on Eastern side.

3.2 The developments on the two major transnational pipelines are mentioned below:-

(i) Iran – Pakistan – India (IPI) Gas Pipeline Project

3.3 India has been discussing Iran – Pakistan – India (IPI) Gas Pipeline Project with the Government of Iran and Pakistan for quite some time. In pursuance of the Cabinet decision of 9.2.2005, the Government is discussing the details of the Iran – Pakistan – India (IPI) Gas Pipeline Project with the Governments of Iran and Pakistan. Two separate Secretary-level Joint Working Groups (JWGs), viz. India – Pakistan JWG and India – Iran Special JWG (SJWG) have been constituted for this purpose. So far, three meetings each of the India – Pakistan JWG and the India – Iran SJWG have been held. Various technical, commercial, financial, legal and related issues were discussed in these meetings and reviewed at the Ministerial level.

3.4 The first tripartite Working Group meeting of Iran, Pakistan and India on the IPI Gas Pipeline Project was held in Tehran on 14-15 March 2006. This was a Secretary-level meeting and the Indian delegation was led by Secretary (P&NG). Second trilateral meeting was held on 22-24 May 2006 at Islamabad. Third trilateral meeting was held in New Delhi on 3-4 August 2006. The gas price indicated by Iran was very high and the methodology used for calculation of gas price by the Iranian side was not clear. It was, therefore, decided in the

meeting to appoint a consultant to work out the gas price as per the methodology agreed among the three countries. Subsequently, M/s Gaffney Cline & Associates have been appointed as the consultant by the Iranian side. A meeting to finalize the methodology to be adopted for working out the gas price was held in Dubai on September 28-29, 2006. The price worked out by the consultant, which was based on certain parameters given by Iran, was not acceptable to India and Pakistan. The consultant has been given revised parameters to work out the gas pricing.

3.5 When the Committee desired to know the further progress of Joint Working Group discussions and the tariff agreed upon among the parties, the Committee have been informed by the Ministry as under:-

> "The 4th Tripartite Joint Working Group meeting of Iran-Pakistan-India (IPI) Gas Pipeline Project between the three countries was held in Tehran, Iran on January 24-25, 2007. During the meeting, discussions were held on the report submitted by International consultant M/s Gaffney Cline & Associates on the gas price at Iran-Pakistan border. A gas pricing formula regarding pricing of gas at Iran-Pakistan border was agreed between Iran and Pakistan side, subject to approval from the respective Governments. The Indian side agreed to respond to the pricing formula shortly. The price formula is covered by confidentiality agreement.
>
> The effective delivered price of gas at Pakistan-India border would involve components of transportation cost and transit fees for passage of gas through the territory of Pakistan, apart from the price of gas at Iran-Pakistan border. In addition to the above, the delivered price of gas for Indian customers would also include Customs duty (@ 5%), marketing margin, transportation cost in India and VAT (@12.5%).
>
> Details regarding transportation tariff and transit fees for passage of pipeline through Pakistan were discussed with Pakistan in 4th India-Pakistan Joint Working Group (JWG) meeting held in Islamabad on 22-23 February 2007. Subsequently, a Technical sub-group meeting on Pipeline Hydraulic System Design & Project Cost Assumptions for IPI Project was held in Delhi on 22-23 March 2007. In this meeting, issues relating to transportation tariff and transit fees for passage of pipeline through Pakistan were also

discussed. Further discussions are underway with Pakistan on the above mentioned issue."

3.6 When the Committee desired to know whether USA has raised some objections on IPI project, the Committee were informed during the examination of Demands for Grants (2007-08) of the Ministry of Petroleum & Natural Gas as under:-

> "During visit of US Secretary of State Dr. Condoleezza Rice to India in March 2005, she told the media that the US had conveyed its concerns on the proposed gas pipeline cooperation between India and Iran. The US legal position on this issue flows from its Iran-Libya Sanctions Act (ILSA) of 1996 that provides for the imposition of sanctions against foreign companies that make an investment of more than US $ 20 million in one year in Iran's energy sector. No US official has, to date, directly stated that the proposed pipeline would be considered a violation of Iran-Libya Sanctions Act.:"

3.7 Regarding the outstanding issues of the Iran-Pakistan-India Pipeline, the Secretary deposed during oral evidence as under:-

> "Almost all the issues have been sorted out. We have finally come down to the last issue namely the price issue which in my opinion should have been the first issue. Right now, tomorrow, Secretary level trilateral discussions will go on and hopefully, that will clinch….. Within the next one or two days, the whole issue will be clinched. The pipeline design is ready. Technical issues have been sorted out, alignment and diameter have been frozen and it is only after the Ministerial level meeting, an understanding will be signed at the Ministers level and implementation will commence. We are very close to clinching the Iran-Pakistan-India pipeline."

3.8 The Committee have been further informed that the Government is pursuing the import of natural gas from Iran in national interest in order to meet the energy requirements of the country.

(ii) Myanmar – India Gas Pipeline Project

3.9 The Committee desired to know the latest status of discussions being held with Myanmar for bringing gas to India through North-Eastern States.

Responding to the query, the Ministry of Petroleum & Natural Gas stated as under:-

> "In January 2005, Minister (P&NG) participated in a trilateral Ministerial meeting between the Oil Ministers of Bangladesh, Myanmar and India. In pursuance of the trilateral Joint Press Statement released after that meeting, a Techno-Commercial Working Committee (TCWC) of the representatives of the three countries was constituted. The first meeting of the TCWC was held in Yangon on 24-25 February 2005. The TCWC prepared a draft MoU to be signed by the three oil Ministers after the approval of their respective Governments. However, the approval of the MoU has been delayed on account of differences between India and Bangladesh over one preambular paragraph in the draft MoU. Minister (P&NG) visited Dhaka on 5th September 2005 to discuss issues relating to the draft MoU. However, no further progress could be achieved.
>
> In view of the above, India is pursuing the option of a pipeline from Myanmar through North-Eastern States of India. GAIL has recently received the detailed feasibility report of the onland pipeline from Myanmar to India through North-Eastern Indian States, bypassing Bangladesh territory. As per the DFR the proposed pipeline will pass near Aizawl (Mizoram), Silchar & Guwahati (Assam), Siliguri (West Bengal) and Gaya (Bihar). This is the optimal route for evacuation of natural gas from Myanmar to India via North Eastern Indian Territory. This pipeline has provision to supply natural gas from Myanmar to the States of Tripura and Assam, besides West Bangal, Bihar etc. The designed capacity of the pipeline is 18MMSCMD and pipeline length is 1573 Kms from Myanmar-India border to Gaya(Bihar). The estimated completion schedule is 36 months after project approval.
>
> Myanmar has recently invited bids for selling natural gas from A1-A3 offshore blocks. GAIL has also submitted its bid. Opening of bids is awaited. Further action for evacuation of gas from these blocks will be initiated if GAIL's bid is accepted by Myanmar."

3.10 On being further asked as to whether the detailed feasibility report on 'on land' pipeline from Myanmar to India through North-Eastern Indian States, bypassing Bangladesh territory has been placed before the Board of Directors of GAIL, the Committee was informed as under:-

“GAIL & OVL farmed into the A1 Block in Myanmar on 28 January 2002. The combine also farmed into A3 Block on October 3, 2005. OVL and GAIL have participating interest of 20% and 10% respectively in both the blocks. Daewoo is the operator in these blocks with 60% interest. Remaining 10% interest is with KOGAS of South Korea. The blocks have shown reserves upto 4.8 TCF during exploration phase. Further exploration in A3 block is in progress.

India is pursuing the option of a pipeline from Myanmar through North-Eastern states of India, bypassing Bangladesh. GAIL has completed the Detailed Feasibility Report (DFR) of the proposed pipeline in April 2006. As per the DFR, the proposed pipeline will pass near Aizawl (Mizoram), Silchar & Guwahati (Assam), Siliguri(West Bengal) and Gaya (Bihar). This pipeline has provision to supply natural gas from Myanmar to the States of Tripura and Assam, besides West Bangal, Bihar, etc. The design capacity of the pipeline is 18 MMSCMD and pipeline length is about 1,573 Kms from Myanmar-India border to Gaya (Bihar).

Ministry of Energy, Myanmar invited bids for export of gas through pipeline in August 2006. GAIL also submitted its competitive bid. Myanmar side informed that the offers did not meet their expectations.

Thereafter, LNG option for export of gas was considered by the Government of Myanmar and LNG bids were invited in December 2006.

The offers received under the LNG bid and the pipeline bid were discussed during a meeting held at Nay Pyi Taw (NPT) on 10 January 2007. The Myanmar side indicated that out of the presently available gas of about 4.8 trillion cubic feet (tcf), their Government would like to earmark a portion for their domestic requirement. The balance gas would not have been sufficient for export. Myanmar informed that they had taken up drilling in A3 block and, based on the result of drilling and quantity of gas available, they would take a decision on selling the gas through available options.

However, Daewoo, the operator of the blocks, informed in March 2007 of the interest of the Myanmar Government to export gas from these blocks to China. To discuss this issue, a meeting was again organized at NPT on 16 March 2007. During this meeting, GAIL impressed upon the other partners and Myanmar Government that GAIL’s pipeline offer is still the most competitive and offers optimum value for them due to proximity of India to these fields. On this basis, GAIL continues to oppose any move to export gas to

China. Further, discussion on this issue is continuing between Myanmar Government and the Operator.

With regard to putting up the DFR to GAIL Board, there needs to be a commitment of supply from Myanmar side. The same has not yet been received."

3.11 As regards procurement of gas from Myanmar, the Secretary of the Ministry of Petroleum and Natural Gas stated during oral evidence as under:-

"As far as Myanmar is concerned, we own 30 per cent share. OVL and the Gas Authority together own 30 per cent share in two fields, A-1 and A-3. The total expected produceable reserves are about four trillion cubic feet of gas. If you take our share, it comes to about 10 to 12 million cubic feet of gas per day which is not contributing to viable transportation through our pipeline. What we have been trying to do is, are trying to negotiate to buy other share also so that we could transport it. What Myanmar Government has said is that they wanted to first get a higher price which we did not really find appealing. Thailand offered a higher price for gas. We said that it is all right, you sell it and we will take the money and buy the gas elsewhere. LNG is available and we can buy it at that price. Myanmar cancelled that tender and then they are telling us to just wait till April and they are assessing their reserves. Once their reserves are reassessed, their figure gets boosted up so that we will permit a higher level of production so that we can a take a higher share once it is permitted. I think viability of pipelines might become much better. We have already done the project report."

CHAPTER-IV

RECOMMENDATIONS/OBSERVATIONS OF THE COMMITTEE

4.1 The wide gap between demand and supply of natural gas in the country is a matter of great concern. The Committee have been informed that the estimated demand of natural gas in the country in 2010-11 would be 262.07 MMSCMD. Even though gas production is expected to increase substantially in the coming years because of discoveries made from fields awarded under the New Exploration Licensing Policy (NELP), the same would not be sufficient to cater to the requirements of various sectors. This fact has been accepted by the Ministry whose conservative and optimistic gas supply projections in the year 2010-11 have been pegged at 113.09 and 197.09 MMSCMD respectively. The Committee are of the view that in order to bridge the demand and supply gap, the Government has to act fast on both domestic and international fronts. On the domestic front, the Government should lay utmost emphasis on acceleration of indigenous E&P activities and exploitation of Coal Bed Methane resources, besides intensifying the R&D on sources like gas hydrates and coal gasification. On the international front, there is an urgent need to be part of the Trans-national Pipeline Projects so as to ensure a steady flow of gas in the country. Besides, emphasis should also be laid on procurement of LNG from abroad. The Committee desire the Government to take result-oriented approach in each of these areas.

4.2 The Committee note that at present the pricing of APM gas, which comes from the fields of ONGC and OIL given to them on nomination basis, is being decided by the Government, while the pricing of gas produced from the fields under Joint Venture/New Exploration Licensing Policy is being governed in terms of the provisions of Production Sharing Contracts (PSC). The Committee further note that the share of APM gas, which forms about 60 per cent of the total gas available at present, is likely to come down to around 15-20 per cent by 2011-12 while the production from NELP/JV fields would go up to a considerable extent. Thus, it would be in the fitness of things to develop a suitable pricing mechanism for the gas produced from NELP/JV fields. As per the provisions of the PSC of the NELP rounds, the price of natural gas for sale to consumers is to be market-driven. The PSC also stipulates that prior approval of the Government has to be obtained for the formula or the basis on which the price is fixed. The PSC further states that while granting approval, the Government shall take into account the prevailing policy on pricing of natural gas and it may delegate or assign this function to a regulatory body as and when such an authority is in place. The Committee have been informed that a High Powered Pricing Committee has been constituted to prescribe a clear set of guidelines in order to ensure that the pricing is determined on a transparent basis. The Committee, while appreciating the constitution of the High Powered Pricing Committee, desire the Government to chalk out a gas pricing and utilization policy incorporating sufficient incentives for E&P companies and at the same time adequately addressing the concerns of the main consumers, i.e. the fertilizer and power industries. In this connection, the Committee would like the Government to make appropriate changes in the Production Sharing Contracts of the future NELP rounds so as to allocate some quantity of natural gas from new finds to power and fertilizer industries. Besides, the Government should also consider prescribing a minimum floor price to

protect its revenue in terms of profit petroleum and a ceiling price to protect the consumer interest.

The Committee further understand that the pricing of gas to be produced from the KG basin D-6 block is yet to be finalized. They hope that the Government would give due weightage to all stakeholders such as the producer, consumer, concerned State Government, etc., while deciding on the pricing issue and settle the issue at an early date.

4.3 Indian Gas Market is still in its infancy with only one cross country pipeline (HBJ pipeline) catering to the large volume of gas transportation to different geographical markets. In the opinion of the Committee, the pipeline infrastructure needs to be developed expeditiously with simultaneous gas supply tie-ups. Besides, the Committee also note that most of the transmission infrastructure of GAIL (India) Ltd. has been installed in the North-West of India for transportation of gas to shore from the Western offshore fields and for transmission of this gas to end users. There exists regional gas grids of varying sizes in various States. Since substantial discoveries have also been made on the Eastern Coast in the recent years, the Committee desire that the Eastern and the Southern parts of the country should as well be urgently equipped with adequate transmission infrastructure. In order to expedite the transmission infrastructure, the Government should quickly decide on the pipeline projects pending before it for approval. While considering/ approving the proposals, care should, however, be taken to avoid duplication of pipeline routes.

4.4 The Committee have been informed that requests have been received from the Krishna Godavari Gas Network Limited, Andhra Pradesh for grant of authorization for laying, building, operating and expanding common carrier natural gas pipelines in Andhra Pradesh and from the Reliance Fuel Resources Limited to build a natural gas pipeline from Kakinada, Andhra Pradesh to Dadri, Uttar Pradesh. They have been further informed that the Government has sought certain information pertaining to these projects. The Committee desire that upon receipt of the desired information from the concerned authorities, the Government should take expeditious and befitting action on these proposals, keeping the interests of the inhabitants of the concerned States in view. The action taken in the matter may be conveyed to the Committee within three months from the presentation of this Report.

4.5 The Committee, in their Seventh Report (14th Lok Sabha), had noted with concern that a number of fertiliser plants had been closed down or rendered unviable because of the increasing cost of naphtha which needed to be converted into gas based plants to make them viable. They had recommended that while laying the future gas pipelines, the Government should take into account the locations of such fertiliser units so as to facilitate their linking to the pipeline network. During oral evidence, the Committee have been informed that the Government is in the process of connectivity, for which the GAIL is preparing the pipeline grid blueprint. They have also been informed that as per the assessment of the Government, there is a shortfall of about 18/19 million cubic metres of gas for all the fertilizer units to be fully converted into gas based and that by 2010, all the fertilizer units in the country would operate only on gas. The Committee desire the Government/GAIL to finalise and put in place the grid connectivity in synchronisation with procurement and allocation of gas to such units well in time. They further desire that year-wise targets for the linkage of such units and allocation of gas to them should be set with continuous monitoring of the progress by the Ministry. The Committee should also be kept apprised of the progress made in achieving the desired targets.

4.6 The Government has notified the 'Policy for Development of Natural Gas Pipelines and City or Local Distribution Networks' on 20 December 2006 which is aimed at providing a policy framework for the future growth of pipeline infrastructure in the country. The said policy stipulates that the Government may prepare a long-term perspective plan for creating gas pipeline network in consultation with the various stakeholders. The Committee would like to be apprised of the action taken by the Government for preparation of the said perspective plan as well as the time schedule by when the process is proposed to be completed. In this connection, the Committee would like to advise the Government to review the efficacy of the policy from time to time and effect appropriate changes in the same to ensure that the long-term perspective growth in the pipeline infrastructure in the country is not hampered. They further desire that the job of developing a set of technical and safety standards of the highest order as well as a code for grid connectivity should be completed at the earliest.

4.7 The Committee note that the Gas Pipeline Policy *inter alia* stipulates the constitution of a Gas Advisory Body(GAB) to advise the Government on matters relating to this policy. They have been informed that the constitution of the GAB would be considered after the Petroleum and Natural Gas Regulatory Board(PNGRB) starts functioning. Since the PNGRB has already been established, the Committee desire that the Government should put in place the GAB at the earliest. Besides, efforts should also be made to avoid duplication of work by GAB and PNGRB.

4.8 The Indraprastha Gas Limited and Mahanagar Gas Limited are engaged in developing CNG infrastructure in Delhi and Mumbai respectively. As per data furnished to the Committee, there are 146 and 122 CNG stations in Delhi and Mumbai, respectively. The Committee have been informed that IGL has a compression capacity of 19.08 lakh kgs/day which needs to be enhanced to 22 lakh kgs/day to cater to the additional requirements which are likely to crop up in the near future in Delhi. For the purpose, the number of stations has to be increased from 146 to around 250 by 31 March 2008. The Committee desire that concerted efforts should be made in the direction of acquisition of sites for these stations. Besides, tie-ups for sourcing additional gas should also be firmed up expeditiously. The Committee have also been informed that MGL had plans to increase the number of stations to 140 by mid-2007. The Committee would like to know the success achieved in setting up the additional CNG stations by MGL.

4.9 In order to promote the use of CNG by converting the existing taxis, heavy commercial and private vehicles into CNG mode, the Government is emphasizing on keeping the CNG cost lower than other types of fuel like petrol and diesel. The Committee have been informed that CNG costs approximately 66 per cent cheaper than petrol and 40 per cent cheaper than diesel in Delhi. As a result of the initiative taken by the Government to promote the conversion of vehicles into CNG mode and also the relatively lower cost of CNG, the number of CNG vehicles in the country are increasing rapidly. In order to meet the requirements of such vehicles, the Committee desire that CNG infrastructure in the country should be augmented alongwith tie-ups with gas companies so as to have ensured gas supply. The Committee further desire that the Government should consider the introduction of a subsidy scheme for the company-fitted CNG kits/fitments so as to encourage more and more vehicle owners to go in for this environment-friendly fuel mode.

4.10 Piped Natural Gas (PNG) has a number of advantages over Liquefied Petroleum Gas (LPG) such as continuous supply, low cost, safety, no storage problem, tamper proof, etc. Similarly, large scale use of CNG can also prove extremely beneficial in checking atmospheric pollution. However, in spite of these advantages, the Committee find that the introduction of CNG/PNG has been confined to only a few cities in the country. Considering the benefits of CNG & PNG, the Committee feel that there is a great need to extend the CNG/PNG network to all major cities in the country in a time-bound manner. They, therefore, desire the Government to make a realistic assessment of the time limit by which such facilities can be provided in all major cities of the country and based on this assessment, prepare a road-map detailing various activities needed to be carried out for this purpose.

4.11 The Committee note that different rates are charged from domestic, small commercial, medium commercial and large commercial consumers in Delhi for the use of PNG. While the rate charged from domestic consumers is Rs. 13+4% VAT per SCM, the rates in case of small and medium commercial consumers are Rs. 17.79+4% VAT and Rs. 20.83+4% VAT per SCM, respectively. The Committee are surprised to note that large commercial consumers in Delhi (with consumption above 2100 SCM per day) were being allowed a preferential rate of Rs. 12.23+4% VAT per SCM until 15 March 2007 when this preferential rate was withdrawn. In the opinion of the Committee, the withdrawal of this preferential rate for large commercial consumers is a step in the right direction. However, in the Committee's view this preferential rate should not have been granted to such category of consumers in the first instance. They would like to know the rationale behind giving this facility to large commercial consumers initially and the factors which prompted the Government to withdraw the same w.e.f. 15 March 2007.

4.12 Hon'ble Supreme Court has identified 13 cities as air polluted cities. These cities are Agra, Lucknow, Kanpur, Varanasi, Pune, Faridabad, Patna, Ahmedabad, Sholapur, Hyderabad, Bangalore, Kolkata and Chennai. The Committee find that out of these 13 cities, joint venture companies have been established by GAIL in only 5 cities, viz. Agra, Lucknow, Kanpur, Pune and Hyderabad for implementation of City Gas Distribution Projects. In addition, MoU for formation of joint ventures has been signed for the city of Bangalore and MoU for the city of Kolkata is under progress. Thus, in case of a number of identified cities, the job of formation of joint venture companies still remains to be completed. The Committee desire that all out efforts should be made without any further delay to form joint venture companies in the remaining identified cities particularly those falling in NCR, viz. Faridabad, etc. The Committee also desire that the air pollution level in other cities adjacent to Delhi, viz. Noida, Gurgaon, Ghaziabad, Sonepat, Meerut, etc. may be carried out on a priority basis so that setting up of joint venture companies there could also be considered. They further desire that the cities where joint venture has already been set up, subsequent work on the project such as acquisition of sites, obtaining of clearances, sourcing of gas, etc. should be taken up and executed in a time-bound manner. In the opinion of the Committee, the progress on the City Gas Distribution Project has not been to the optimum level. Considering the importance of the Project, the Committee desire the Government to attach utmost importance to it and work on the same in a time bound and expeditious manner. They also desire the Ministry to constantly monitor the review of progress on the project.

4.13 India enjoys the advantage of being geographically closer to 4 gas-rich countries viz. Iran, Qatar, Saudi Arabia and Abu Dhabi. In the opinion of the Committee, the Government should cash in on this plus point and make concerted efforts to procure more and more LNG through long term agreements. In this connection, the Committee have been informed that PLL and GAIL are at advanced stages of discussion with Gorgon LNG, Australia and Sonatrach, Algeria for import of LNG. They desire that vigorous efforts should be made by the respective companies and the deals finalised at the earliest. The Committee further desire that the Government should closely monitor the steps being taken by oil PSUs in the direction of import of LNG and involve itself in the process, if the situation so demands. The success achieved by PLL, GAIL and other oil PSUs in procuring LNG from various sources should be conveyed to the Committee.

The Committee have been further informed that GAIL, IOCL and BPCL had signed contracts with the National Iranian Gas Export Company in June 2005 for import of 5 MMTPA LNG with effect from 2009. However, the Sale Purchase Agreement has not yet become effective because of lack of approval by the National Iranian Oil Company's Board. Though the matter has been pursued by the Indian authorities, the requisite approval has not yet been obtained. The Committee desire that the Government should take up this issue at the highest political level without any further delay.

4.14 The Committee have been informed that the Petronet LNG Limited (PLL) is evaluating bids of lumpsum turn key contract for Engineering, Procurement and Construction for the LNG terminal project at Kochi and that the contract for the same was likely to be awarded by June 2007. They hope that the said contract might have been finalised and awarded by now. The Committee would like to be apprised of the details in this regard. They further desire that the project should be commissioned as per the target.

The Committee, in their previous Reports, have emphasized on the need for setting up of LNG terminals on the East Coast, especially at Krishnapatnam. They would like to know the plan of action chalked out by the Public Sector Oil Companies towards this end.

4.15 The Committee have been informed that the Ministry of Petroleum & Natural Gas has raised some proposals pertaining to the LNG sector with the Ministry of Finance such as 'declared goods' status to natural gas, nil import/customs duty for LNG/capital goods for LNG and 'infrastructure' status for LNG projects. More or less similar proposals have also been moved by the Ministry of Power. The Committee agree with the proposals of these Ministries and desire that the status of 'declared goods' and 'infrastructure' should be granted to natural gas/LNG projects in order to give a fillip to the LNG sector. They further desire that import duty/customs duty on LNG/capital goods for LNG should be brought down to nil at the earliest.

4.16 The Committee in their 14th Report (14th Lok Sabha), had desired that the unresolved issues between India and Pakistan relating to the Iran-Pakistan-India Pipeline Project such as transportation tariff and transit fee should be sorted out quickly. They would like to know the status of settlement of these issues. Besides, other developments that have taken place on this project should also be conveyed to the Committee. Similarly, regarding the procurement of Myanmar gas, the Committee, in the above-mentioned Report, had recommended that the Government should vigorously pursue the matter with the Government of Myanmar and clinch the issue in our favour. They would like to know the details of efforts made by the Government/GAIL in this regard, the outcome of such efforts and the future course of action proposed to be resorted to in the matter. The Committee further desire that besides these trans-national pipelines, the Government should also explore the possibility of participating in other trans-national pipelines such as trans-Sahara Pipeline.

New Delhi;
11 September, 2007
20 Bhadrapada, 1929 (Saka)

N. JANARDHANA REDDY,
Chairman,
Standing Committee on
Petroleum & Natural Gas

ANNEXURE I

EXTRACTS OF MINUTES

STANDING COMMITTEE ON PETROLEUM & NATURAL GAS

(2005-06)

TENTH SITTING

(6.6.2006)

The Committee sat on Tuesday, the 6th June, 2006 from 1530 hrs. to 1730 hrs. in Committee Room 'C', Parliament House Annexe, New Delhi.

PRESENT

Shri N. Janardhana Reddy - Chairman

MEMBERS

LOK SABHA

2 Shri Anandrao Vithoba Adsul
3 Dr. Rattan Singh Ajnala
4 Shri R. Dhanuskodi Athithan
5 Shri Kirip Chaliha
6 Shri Lal Muni Choubey
7 Dr. Tushar A. Chaudhary
8 Shri Santosh Gangwar
9 Shri Jai Prakash
10 Shri Hari Rama Jogaiah
11 Adv. Suresh Kurup
12 Shri Lakshman Singh
13 Shri Sukdeo Paswan
14 Dr. Prasanna Kumar Patasani
15 Shri Rajiv Ranjan 'Lalan' Singh
16 Shri Ramjilal Suman
17 Shri Vanlalzawma
18 Shri Ratilal Kalidas Varma
19 Shri Rajesh Verma
20 Shri A.K.S. Vijayan

RAJYA SABHA

21 Ms. Mabel Rabello

22 Shri Tapan Kumar Sen
23 Shri C. Perumal
24 Shri Subash Prasad Yadav

SECRETARIAT

1.	Shri R.C.Kakkar	-	Deputy Secretary
2.	Shri P.C.Tripathy	-	Under Secretary

Representatives of the Ministry of Petroleum & Natural Gas

1.	Shri M.S. Srinivasan	-	Secretary
2.	Shri P.K. Sinha	-	Joint Secretary & Financial Advisor
3.	Shri Sunjoy Joshi	-	Joint Secretary
4.	Shri Ajay Tyagi	-	Joint Secretary

Representatives of Public Sector Undertakings

5.	Shri B.S. Negi	-	Director (BD), GAIL
6.	Dr. U.D. Choubey	-	Director (Marketing), GAIL
7.	Shri N.K. Mitra	-	Director (Offshore), ONGC
8.	Shri B.M. Bansal	-	Director (P&BD), IOCL

2. At the outset, Hon'ble Chairman welcomed the new Members to the sitting of the Committee and explained the purpose of holding the sitting i.e. briefing by representatives of the Ministry of Petroleum & Natural Gas and concerned PSUs on the subject 'Supply, Distribution and Marketing of Natural Gas including CNG and LNG'.

3. *** *** *** *** *** ***

4. Thereafter, the representatives of the Ministry were called in to brief the Committee. Hon'ble Chairman welcomed them to the sitting of the Committee and invited their attention to the provisions contained in Direction 55(1) of the Directions by the Speaker.

5. After introducing his colleagues, the Secretary of the Ministry gave a brief background of the subject and requested to give a visual presentation on various aspects. Then the representatives of the Ministry gave a visual presentation before the Committee highlighting the various issues relating to the subject viz. Natural gas demand scenario as projected by Hydrocarbon Vision 2025, allocation of APM gas, gas availability projection, steps taken to increase gas availability, LNG projects, transnational pipelines, pricing of gas, status of CNG distribution, legal framework for natural gas pipelines, etc.

6. The Members raised certain queries which were replied to by the representatives of the Ministry.

7. *** *** *** *** *** ***

8. The verbatim record of the proceedings of the sitting has been kept.

The Committee then adjourned.

*****Matters not related to this Report.**

ANNEXURE II

MINUTES

STANDING COMMITTEE ON PETROLEUM & NATURAL GAS (2006-07)

SIXTH SITTING
(24.1.2007)

The Committee sat on Wednesday, January 24, 2007 from 1500 hrs. to 1700 hrs. in Committee Room 'C', Ground Floor, Parliament House Annexe, New Delhi.

PRESENT

Dr. M. Jagannath - In the Chair

MEMBERS

Lok Sabha

2 Shri M.Appadurai
3 Shri Kirip Chaliha
4 Dr. Tushar A. Chaudhary
5 Shri Lal Muni Choubey
6 Adv. Suresh Kurup
7 Shri Sukdeo Paswan
8 Shri Nakul Das Rai
9 Shri Ramjilal Suman
10 Shri A.K.S. Vijayan
11 Shri Ram Kripal Yadav

Rajya Sabha

12 Ms. Mabel Rebello
13 Shri Rajeev Shukla
14 Shri Suresh Bhardwaj
15 Shri Amir Alam Khan
16 Shri Tapan Kumar Sen

17 Shri C. Perumal

18 Shri Subhash Prasad Yadav

Secretariat

1	Shri S.K.Sharma	-	Additional Secretary
2	Smt. Anita Jain	-	Deputy Secretary
3	Shri P.C. Tripathy	-	Under Secretary

List of Witnesses

Representatives of the Ministry of Petroleum & Natural Gas

1.	Shri M.S.Srinivasan	-	Secretary
2.	Shri P.K.Sinha	-	Joint Secretary & Financial Advisor
3.	Shri D.N.Narasimha Raju	-	Joint Secretary (Marketing)

Representatives of Public Sector Undertakings/Organisations

1.	Shri R.S. Sharma	-	CMD, ONGC
2.	Shri M. R. Hingnikar	-	CMD, GAIL
3.	Shri P.K.Gupta	-	Managing Director, MGL
4.	Shri Om Narayan	-	Managing Director, IGL

2. In the absence of the Chairman, the Committee chose Dr. M. Jagannath to act as Chairman of the Committee under Rule 258(3) of the Rules of Procedure and Conduct of Business in Lok Sabha. The acting Chairman then welcomed the Secretary of the Ministry of Petroleum and Natural Gas and other accompanying officials of the Ministry as well as Public Sector Undertakings/Organisations to the sitting of the Committee.

3. Thereafter, the Committee took oral evidence of the representatives of the Ministry/PSUs on the subject 'Supply, Distribution and Marketing of Natural gas including CNG and LNG'. During the course of evidence, a number of important issues relating to the subject viz. status of gas reserves in the country, exploration in specific geographic areas, infrastructure available for exploration of oil and gas, city gas projects, import of natural gas/LNG, transnational pipelines, etc. were discussed. The Members sought clarifications on various points most of which were responded to by the representatives. The Ministry was asked to furnish written replies to the queries which could not be replied during the sitting.

4. A copy of the verbatim proceedings of the sitting has been kept.

The Committee then adjourned.

ANNEXURE III

EXTRACTS OF MINUTES

STANDING COMMITTEE ON PETROLEUM & NATURAL GAS (2007-08)

SECOND SITTING (10.09.2007)

The Committee sat on Monday, September 10 2007 from 1530 hrs. to 1600 hrs. in Committee Room `B', Parliament House Annexe, New Delhi.

PRESENT

Shri N. Janardhana Reddy - Chairman

MEMBERS

Lok Sabha

2 Shri M.Appadurai
3 Shri Kirip Chaliha
4 Dr. Tushar A. Chaudhary
5 Shri Lal Muni Choubey
6 Dr. M. Jagannath
7 Shri Jai Prakash
8 Shri P Mohan
9 Shri Sukdeo Paswan
10 Shri Nakul Das Rai
11 Shri Ramjilal Suman
12 Shri Ratilal Kalidas Varma
13 Shri Ram Kripal Yadav

Rajya Sabha

14 Shri Suresh Bhardwaj
15 Shri C. Perumal

Secretariat

1	Shri N.K.Sapra	-	Joint Secretary
2	Smt. Anita Jain	-	Director
3	Shri P.C. Tripathy	-	Deputy Secretary
4.	Shri Ram Kishan	-	Under Secretary

2. At the outset, the Chairman welcomed the Members to the sitting of the Committee.

3. The Committee, then, took up for consideration the following draft Reports and adopted the same without any modifications:

(i) Sixteenth Report on 'Supply, Distribution and Marketing of Natural Gas including CNG and LNG'; and

(ii) *** *** *** *** ***

4. The Committee authorised the Chairman to finalise the Reports in the light of consequential changes, if any, arising out of the factual verification of the Reports by the Ministry and present the same to Hon'ble Speaker/both Houses of Parliament.

The Committee then adjourned.

*****Matters not related to this Report.**