E. C. No. 543

ESTIMATES COMMITTEE
(1967-68)

FIFTIETH REPORT

(FOURTH LOK SABHA)

(MINISTRY OF PETROLEUM AND CHEMICALS)

Petroleum & Petroleum Products

LOK SABHA SECRETARIAT
NEW DELHI

April, 1968/Chaitra, 1890 (Saka)
Price : Rs. 3/-

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CORRIGENDA

To

Fiftieth Report of Estimates Committee on the Ministry of Petroleum and Chemicals - Petroleum and Petroleum Products presented on 16.4.1968.

....

Page (iii), line 25, for 'III Distribution' read 'VIII Distribution'.

Page 6, para 1.23, line 1, for '964' read '1964'.

Page 14, para 2.18, line 8, for 'roncessions' read 'concessions'.

Page 21, para 2.44, line 7, for '16' read '14'.

Page 37, para 4.10, line 3, for ':25' read '.25'; line 4, for '3:9' read '3.9'; and line 7, for '11:5' read '11. 5'.

Page 58, para 4.86, line 2, insert 'of' after 'estimates'.

Page 60, para 4.93, line 3, insert 'by' after 'enquiry'.

Page 73, para 5.15, Model calculation, for '38q' read '38 ¢ ' and for '26q' read '26 ¢'.

Page 86, para 5.48, lines 2-3, delete 'brackets'.

Page 111, para 6.15, line 7, for 'all' read 'able'.

Page 135, para 7.53, line 4, delete 'on'.

Page 140, para 7.77, line 1, for 'caught' read 'couch'.

Page 146, para 7.97, line 1, for 'Refinerring' read 'Referring'.

Page 149, para 8.4, line 9, for 'Koyani' read 'Koyali'.

Page 184, para 11.7, line 3, for 'note' read 'noted'.

(P.T.O.)

Appendix VI

Page 215, S.No.2, line 3, for 'collaborate' read 'collaborative'.
Page 218, S.No.9, line 9, for '16' read '14'.
Page 219, S.No.11, lines 15-16, delete 'in the private sector'.
Page 223, S.No.17, lines 1-2, delete 'In view ... past' and for 'the' read 'The'.
Page 225, S.No.21, line 23, for 'welcome' read 'appreciate'.
Page 226, S.No.22, add as a last sentence: 'The Committee would also like the Government to keep the flexibility of product pattern in view at the time of designing of the refineries in future'.
Page 227, S.No.24, line 14, after 'production' add 'Government should also examine the feasibility of producing LPG at Gauhati'.
Page 228, S.No.28, lines 7-8, for 'are surprised' read 'regret'.
Page 229, S.No.28, line 23, for 'Government' read 'country'.
Page 231, S.No.30, lines 7-8, after 'discounts' add 'so as to reduce prices'.
Page 237, S.No.42, line 1, delete 'precious' and line 5, after 'particularly' insert 'as'.
Page 241, S.No.54, lines 14-15, delete 'not... refinery'.
Page 242, S.No.55, line 9, delete 'on'.
Page 245, S.No.62, line 5, for 'France' read 'French sources'.

Appendix VII

Page 255, sub-head C, insert '78' after '77'.

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APPENDICES

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(1967-68)

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Shri B. B. Tewari—*Deputy Secretary.*

Shri G. D. Sharma—*Under Secretary.*

INTRODUCTION

I, the Chairman, Estimates Committee, having been authorised by the Committee to submit the Report on their behalf, present this Fiftieth Report on the Ministry of Petroleum and Chemicals—Petroleum and Petroleum Products.

2. The Committee took evidence of the representatives of the Ministry of Petroleum and Chemicals, Indian Oil Corporation and Oil & Natural Gas Commission on the 13th, 14th, 15th and 18th December, 1967. The Committee wish to express their thanks to the Secretary and other officers of the Ministry of Petroleum and Chemicals, Chairman, Indian Oil Corporation and other officers of the Corporation and the representatives of the Oil and Natural Gas Commission for placing before them the material and information desired in connection with the examination of the estimates.

3. The Committee also wish to express their thanks to Shri J. N. Talukdar, Chairman of the Working Group on Oil Prices for giving evidence and making valuable suggestions to the Committee.

4. They also wish to express their thanks to all those who furnished memoranda on the subject to the Committee.

5. The Report was considered and adopted by the Committee on the 28th and 29th March, 1968.

6. A statement showing analysis of recommendations contained in the Report is also appended to the Report (Appendix VII).

NEW DELHI-1;
April 5th, 1968.
Chaitra 16, 1890 (*Saka*).

P. VENKATASUBBAIAH,
Chairman,
Estimates Committee.

I

INTRODUCTORY

A. Brief History

1.1. As far back as archaeologists have traced the origins of civilization, evidences of the use of Petroleum have been found. The earliest known evidence is probably the finding of asphalt mortar in buildings erected over 6000 years ago on the banks of the Euphrates river in what is now Iraq. Petroleum in the form of asphalt was a common article of commerce at the beginning of civilization.

1.2. Other oil and asphalt seeps existed on the tributaries of the Indus river and probably supplied the needs of the civilization that developed in the valley of the Indus in West Pakistan. The Chinese civilization that developed on the yellow river also knew and used petroleum, obtaining it, in all likelihood, from wells drilled primarily to produce salt. At least 2000 years ago some Chinese used petroleum oils and gas for heat and light. The gas was conducted from the wells in bamboo pipe. As civilization spread, men used petroleum wherever oil and asphalt reached the surface. Where suppliers were large, a local oil industry of considerable magnitude developed. An outstanding example is the oil business of ancient origin that has been carried on at Baku on the West coast of the Caspian Sea. When Peter the Great conquered the area in 1723, he established a "master of refining" to supervise the handling of oil products and their shipment to Russia. Today Baku remains one of the world's major oil fields.

1.3. The men who pioneered the oil industry overcame many difficulties. With no experience to draw on, they obtained their operating procedures from other industries. The first well drillers borrowed from Artesian Well drillers and developed drilling techniques by trial and error to suit their needs.

1.4. The first refineries—called distilleries—consisted of facilities similar to those used in the coal oil industry. They were operated without controls and without much skill to produce a dozen or so barrels a week of stinking oil which, if it did not explode in a lamp, burned with a smoky flame. By trial and error, however, the secrets of refining were learned.

1.5. Those who first entred the oil business did so as individuals or small companies. The tendency was to specialise. Thus some men became drillers; others produced the crude oil and still others transported it. The refineries also specialised. Most concentrated on making kerosene but others produced only naphtha, lubricating oils or waxes. Oil products were sold through existing Jobbers who normally handled hardware, foodstuffs and the like. Shipment of both crude oil and products was at first only in barrels. Wagons and teams of horses usually moved barrels of crude oil to the rail lines which hauled the barrels to distant refineries.

B. Definition

1.6. The word oil is used to designate a variety of different liquids that are used as foods, medicines, perfumes, paint and varnish components, fuels and lubricants. Until a century ago, oils were obtained from organic sources such as Olive fruits, castor beans, flax seeds, the fats of hogs, cattle, fish and whales. An oil obtained in small amounts from the earth and used chiefly as a medicine was also known. As early as the fourteenth century this oil was named rock oil or in Latin *Petra Oleum* which became Petroleum.

1.7. The name Petroleum emphasizes the fact that Petroleum differs in chemical composition from all other oils. Nevertheless, oil is now synonymous with Petroleum where there can be no confusion of meaning. Oil from the earth is called mineral oil, Petroleum, crude petroleum, crude or simply oil while usage tends to belie it, the proper term is Petroleum.

1.8. Petroleum varies in appearance from a straw coloured, mobile liquid to a black, viscous, even semi-solid material. No two petroleums are alike, each of the thousands of oil fields throughout the world produces its own particular kind of Petroleum. Most petroleums, however, are dark-coloured, are almost as fluid as water and are composed of liquids in which gas is dissolved and solids are both dissolved and dispersed.

1.9. A large part of the gas associated with petroleum separates from the liquid components when the petroleum reaches the surface of the earth. Sometimes it separates by natural processess while the Petroleum is under ground, and the gas is found as natural gas some distance from any oil well. This is the origin of many gas fields.

C. Importance of Petroleum

1.10. Petroleum, more than any other energy source yet available, meets the requirements of modern industrial expansion. Because

Petroleum is a liquid, it can easily be pumped wherever pipes can be laid—from oil field to refinery or from oil tank to engine. When burned, it provides heat without ash. A pound of petroleum provides as much heat as a pound and a third of coal, a pound and a half of alcohol, two and a half pounds of wood or seven pounds of dynamite. Because of its high energy content it is the only fuel suitable for aircraft. It permits ships to travel three times farther without refuelling than any other fuel except atomic energy. In diesel engines, it pulls bigger trains farther and faster at lower cost than steam locomotives. A farmer with hand tools would require thirty times as many hours to produce an acre of wheat as would a farmer with petroleum powered equipment.

1.11. Over ninety per cent of petroleum is used for heat, light and power. The remaining ten per cent is the source of products without which the modern world would be impossible. For example, modern machines could not operate without the lubricants made from petroleum. The first lubricants, which came from animal fats and vegetable oils, could not stand up to the severe demands of modern machines even if they could be made in the volumes required. Synthetic lubricants are yet too specialised and much too costly to take the place of petroleum lubricants. Petroleum in the form of lubricants is essential to the operation of every machine regardless of the kind of power that operates it.

1.12. Petroleum is also the direct source of many materials that are part of, or are used in the production of almost everything we eat, wear or use. Petroleum solvents, for example, have a place in products and operation ranging from floor polishes to cleaning clothes. Asphalts from Petroleum are used in the construction of paved roads, airport runways, roofs, black paints, electrical insulation and tyres. Thousands of tons of waxes from petroleum are used annually in the food packaging industry for bread wrap, milk cartons etc. Petroleum in one form or another is an essential ingredient in thousands of common place articles from lipsticks to weedkillers. Besides the above, petroleum is the raw material from which over half a million organic chemicals can be made.

1.13. Half of the world's consumption of energy at present comes from this one source—oil and natural gas, the remaining half is accounted for by all forms of energy put together. The trend is for a further increase in the share of oil and gas. Oil is likely to retain its pride of place until means are found to harness nuclear energy and solar energy for commercial uses and at competitive rates.

D. Petroleum Industry in India before Independence

1.14. No other sector of our economy was so much ignored during the British regime as oil. The common notion was that excepting Digboi there was no oil elsewhere in India.

1.15. 31 years after the first oil well was found in the United States by Edwin Drake the Assam Railway and Trading Company dug the first Indian oil well in Digboi in 1890 and since then about 1000 wells have been drilled around the Digboi refinery owned by the Assam Oil Company. The production of crude in 1947 was 2,52,100 tonnes per annum coming from the Digboi field.

1.16 The first refinery was built by the Assam Railway and Trading Company in 1883 at Margherita. After the discovery of oil in the Digboi field, a new refinery was commissioned in 1901 and the first kerosene from it was marketed in December 1901. The Burmah Oil Company came into the picture in Assam in 1915 having acquired the oil interest of the Buddorpore Oil Company. Because of the increased crude oil production in 1925, the Digboi refinery was entirely rebuilt and enlarged. This refinery has an operating capacity of 0.45 million tonnes per year.

1.17. On the marketing side the Asiatic Petroleum Company entered the Indian market in 1903 and later in 1921 the Burmah Oil Company started marketing in India. The present Burmah Shell Company was formed in January 1928 and since then it has built up an extensive net work of distribution facilities throughout India. In September 1933 the Standard Vacuum Oil Company commenced operations and also set up extensive marketing facilities in India. ESSO came to India on March 31, 1962 when the Standard Vacuum Oil Company was reorganised and named ESSO Standard Eastern India, wholly owned by the Standard Oil Company (New Jersey), The other major marketing companies were the Caltex Company, the Burmah Oil Company (IT) Limited, the latter operating exclusively in Assam and now known as the Assam Oil Company.

1.18. Thus on the eve of Independence when the demand for petroleum products was about 2.2 million tonnes, roughly 0.2 million tonnes were produced in the country and the balance imported i.e. almost the entire consumption of petroleum products was from imports.

E. Growth of Petroleum Industry since Independence

(i) *Crude Production*

1.19. During the First and Second Plan periods, the production of crude in the country was 1.35 million tonnes and 1.74 million tonnes respectively. The production of crude during the Third Plan was about 9.5 million tonnes only. Production by 1970-71 is expected to be around 9-10 million tonnes of which 6.23 million tonnes is expected to be in the public sector and the balance in the private sector.

1.20. The following figures indicate India's production of crude during the three years (1964 to 1966) as against the figures of world production of crude:

Year	World production	India's production	% of India's share in world production
	(in million tonnes)		
1964	1407·84	2·21	·16
1965	1503·53	3·02	·2
1966	1633·30	4·64	·28

(ii) *Refining Capacity*

1.21. At the commencement of the First Plan, practically the entire demand of the country for petroleum products was met by imports as the output of M/s. Assam Oil Company's refinery at Digboi amounted hardly to about 5 per cent of the requirements.

1.22. With the setting up of refineries both in public and private sectors, the production of petroleum products increased to 3.80 million tonnes in 1956 and to 5.5065 million tonnes in 1960. By early 1966 operating refinery capacity stood at 10.8 million tonnes. By 1970-71 a production of 20 million tonnes of petroleum products is envisaged in the country.

1.23. The following figures show the respective contribution of India and some selected countries to the world production of petroleum products during 964:

Country	Total % contribution to production of petroleum products.
U.S.A.	38
Italy	4·9
U.K.	4·8
India	0·7
Japan	5·2
Pakistan	0·2

(iii) *Consumption*

1.24. The consumption of petroleum products in India was 2.2 million tonnes on the eve of Independence. It increased from 4 million tonnes in 1951 to 5.3 million tonnes at the end of the First Plan Period, to 8.3 million tonnes at the end of the Second Plan period and to 13 million tonnes at the end of the Third Plan. The consumption is estimated at about 23 million tonnes by 1970-71 and at about 30 million tonnes by 1975.

1.25. The following statements indicate the *per capita* consumption of Petroleum Production in India and other countries during 1965.

Country	Kilo Litre/Capita
U.S.A.	2748
France	110
West Germany	1407
U.K.	1373
India	25
Burma	24
Ceylon	89
Indonesia	73
Pakistan	34

1.26. It will be seen from the above figures that the *per capita* consumption of Petroleum products in India is much lower than that of its neighbouring countries like Ceylon, Indonesia and Pakistan.

II

EXPLORATION/PROSPECTING

A. Delay in implementation of Industrial Policy Resolution

2.1. Till independence, exploration and production of oil was in the private sector. The Industrial Policy Resolution of April, 1948 placed 'Mineral Oils', in the group of industries where the State was exclusively responsible for the establishment of new undertakings. The Industrial Policy Resolution of 1956, also included 'Mineral Oils' in Schedule 'A' industries, the future development of which was the exclusive responsibility of the State. Thus after independence, the main development of exploration for oil was to be in the public sector. As to the steps taken by Government for oil exploration in the country in pursuance of the resolution, it has been stated that in 1955, a delegation led by Shri K. D. Malaviya (the then Minister of Mines and Fuel) visited U.S.S.R., Sweden, U.K., Netherland, Switzerland, Rumania, France and West Germany to study exploration techniques and organisation in these countries and to ascertain the scope for technical and financial collaboration with the State and in joint enterprises.

2.2. The Government also invited Mr. N. A. Kalinin of U.S.S.R. and others in 1955 to advise on an exploration programme in India. Based on the recommendations of Mr. Kalinin, an oil exploration programme with an outlay of Rs. 30 crores was drawn up for the Second Plan period. Simultaneously in October 1955 the Oil and Natural Gas Directorate was formed under the then Ministry of Natural Resources and Scientific Research. Thereafter in August, 1956 the Oil and Natural Gas Commission was set up as a Government Department which in October 1959 became a Statutory Commission wholly owned by the Government of India.

2.3. Asked about the reasons for the delay in the setting up of the Oil and Natural Gas Commission, the Secretary of the Ministry of Petroleum and Chemicals stated during evidence, that while it was true that the Industrial Policy Resolution 1948 listed the mineral oil industry as one of those which is the exclusive responsibility of the State for developmental purposes, there was also a proviso that if in the national interest it was necessary to associate private enterprise with governmental effort there would be no bar to this. He added that as far back as 1949, the Government had permitted the private oil companies to carry out certain aeromagnetic and geological surveys as a result of which the Indo-Stanvac Project was launched in 1952-53. Though the discovery of oil in Naharkatiya, thereafter sparked the Government's interest in oil exploration, yet the Government felt handicapped by lack of technical and financial assistance that was necessary for the large scale development. Even though initiatives were taken in organising a search for oil from 1948 onwards it took shape only after 1955. It was also stated that right upto 1953-54 the Government were thinking essentially in terms of collaborative effort and that it was only later in the light of promised assistance from the Soviet Union and Rumania that the Government decided to launch on exploration as a full fledged public sector enterprise.

2.4. The Government was concerned first to find the necessary technical collaboration and secondly to secure necessary financial assistance. From 1953 onwards, the matter was greatly under consideration. Soon after that in 1954-55, a delegation led by Shri K. D. Malaviya the then Minister in-charge of Oil visited the U.S.S.R., Sweden, U.K., Netherlands, Switzerland, Rumania, France and West Germany to study exploration techniques and organisation in those countries and also to ascertain the scope for technical and financial collaboration with the State and as joint enterprises. The official witness further added that Government had also invited experts from the Soviet Union and other countries to study the prospect for oil exploration in India. It was as a result of these initiatives and visits of experts that the Oil and Natural Gas Directorate was set up in 1955, which was later converted into a Statutory Commission in 1959. Elucidating further he stated that upto 1953-54, Government was thinking essentially in terms of collaborative efforts and that it was in the light of promised assistance from the Soviet Union principally and from Rumania that it was decided to launch a full fledged public sector enterprise in this field. The witness admitted that the real systematic approach to oil exploration by the Government through a Government agency started in 1956 when the Oil and Natural Gas Directorate was set up.

2.5. While the Committee realise that at the time of adoption of the first Industrial Policy Resolution in 1948, Government lacked adequate technical and financial resources including foreign exchange resources for the import of rigs and other highly sophisticated equipment for survey, prospecting and exploration of oil in the country, they are unable to appreciate why it should have taken the Government more than seven years to set up the Oil and Natural Gas Directorate. In the absence of such organisation whatever efforts were

made in this behalf lacked drive and direction. The Committee consider that in any case the efforts initiated in 1955 to arrange for technical and financial assistance for oil exploration could well have been preceded by measures to set up an organisation for oil exploration in 1951 at least when they entered into agreements for setting up coastal refineries in the private sector based on imported crude. The Committee cannot help feeling that till 1955 the programme of exploration and prospecting for oil in the country was not given the serious attention that it deserved. The steps taken by Government for exploring oil through collaborative efforts could only be considered half-hearted. Viewed in the light of the wide gap between the availability of indigenous crude and the requirements thereof for the running of refineries set up in the country and the time taken in exploration and commercial production of oil, the Committee consider that a determined effort was required to push through the programme of exploration and prospecting for oil in the country from the very beginning. The Committee recommend that energetic efforts should now be made by Government to accelerate the pace of exploration and prospecting of oil in the country so as to meet domestic demand from indigenous production and obviate the necessity for imports as early as possible.

B. Visits by Foreign Experts

2.6. The Committee have been informed that three foreign experts were invited by Government to advise on oil exploration programme in the country—(i) Dr. N. A. Kalinin (USSR), (ii) Dr. Levorson (USA) and (iii) Dr. Bentz (West Germany). In 1955, Mr. N. A. Kalinin from U.S.S.R. and his team visited the country. After extensive tours, Mr. Kalinin submitted a detailed report on 15th April, 1956 which pointed out that exploration activities should be carried out in all sedimentary areas so as to get a picture of the oil bearing possibilities in various regions in India. He suggested that attention should be concentrated in the Punjab and Rajasthan about which some information was available and where prospects were considered encouraging. He made recommendations on the organisational set up for oil exploration/exploitation organisation in India and suggested that 14 geological parties, 14 gravity parties, 10 seismic parties, 5 structural drilling parties and 5 deep drilling parties be organised. Based on these recommendations, an oil exploration programme with an outlay of Rs. 30 crores was drawn up by the Commission for the Second Five Year Plan period.

2.7. In March, 1956 Dr. Levorson, an American petroleum geologist visited India and assessed the petroleum possibilities in the country.

He submitted his report on the 5th April, 1956. During evidence the Secretary of the Ministry stated that Mr. Levorson did not give any estimate of oil reserves. He expressed his view on the geological features. He said that certain areas, like the Ganga Valley, were prospective, that work might be organised there. According to him the prospects in India for large oil resources being discovered, are good and justify strong exploration programme. He felt that the chances of finding oil in Assam, Bengal were specially good but other areas could also equally well deserve attention.

2.8. Dr. Bentz of West Germany also visited the country in 1956 and submitted his report on the 10th April, 1956 on the search for oil in India. It has been stated that Dr. Levorson of U.S.A. and Dr. Bentz of West Germany gave general reports about prospects of oil in India. Mr. Kalinin's report is said to be the most comprehensive of all the three reports. Elucidating further the representative of the ONGC stated during evidence that Mr. Kalinin came here along with a very good geologist and a very good Drilling engineer. This team toured around all our sedimentary areas. They examined the geology of the rocks outcropping at the margins of the basins. They came here around December, 1955. Their report was actually based on a study which extended over a period of a few months.

Summaries of the reports/recommendations submitted by the three experts are given in Appendix I.

2.9. The reports of Dr. Levorson and Dr. Bentz were submitted on the 5th and 10th of April 1956 respectively while that of Shri N. A. Kalinin was submitted on the 15th April, 1956. Asked about the reasons for inviting the three experts, it has been stated that the object of inviting the experts from three different countries was to obtain independent advice from different sources as oil exploration was a costly and risky venture involving an outlay of several hundred crores of rupees including large amounts of foreign exchange. Government wanted to fortify themselves with the best advice possible before committing themselves to a huge expenditure.

2.10. In this connection the representative of the ONGC stated during evidence that the task before the Oil and Natural Gas Directorate was to launch a heavy exploration programme in the sedimentary areas of India. The most important problem then was to decide which areas to start the work in, what kind of work to do, how much geological and how much geophysical work to be done, where to drill, how to drill—these were the problems before them in those days. By obtaining the services of three independent experts particularly from different countries the Government came to know really as to what was the course to be followed in the best interest of oil and natural gas exploration in India.

2.11. The Secretary of the Ministry added that "as a result of three independent reports it was found that there were three areas of agreed promise. It is interesting that they recommended three areas—Punjab, West Bengal and Rajasthan—as important, prospective areas. This would have given the Government a greater measure of confidence in going ahead with the exploration in these areas."

2.12. The Committee are unable to appreciate why it was necessary for Government to invite foreign experts from three different countries almost simultaneously to advise on oil exploration in the country. Experts from U.S.A. and West Germany were invited when the Russian Team was already working in the country and had not even submitted the report. According to the Government's own admission the report of Mr. Kalinin of U.S.S.R. was comprehensive enough to form the basis of the oil exploration programme in the Second Plan while the reports of the other experts were considered too general. Even if second opinion was considered necessary the normal course would have been to await the report of the first expert. The Committee hope that such instances would not be repeated in future.

C. Private Sector's Role in Exploration

(i) *Indo Stanvac Venture*

2.13. The Industrial Policy Resolution of 1948 made the State exclusively responsible for the mineral oil industry but it also gave an option to the State to secure the cooperation of private enterprise if it was considered necessary in the national interest subject to such control as the Central Government may prescribe.

2.14. The Committee have been informed that as oil exploration is a costly and risky venture, Government endeavoured from the beginning to interest foreign oil companies in the oil exploration programme in India on mutually acceptable terms. As a result of this, in late 1949, the Standard Vaccum Oil Company carried out detailed geological surveys in West Bengal and the adjoining areas in Assam. This was followed by an air-borne magnatometer survey of the alluvial region of West Bengal in late 1951, which outlined the configuration of the shelf and the geosynclinal areas and enabled a fair assessment of the thickness of sediments in different parts of the region. In December 1953, the Indo-Stanvac Exploration Agreement was signed with the Government of India under which an area of about 10,000 sq. miles in West Bengal was set aside for joint exploration effort with the Government of India participating up to 25% of the total cost of the venture. The newly formed Indo-Stanvac Petroleum Project (I.S.P.P.) continued the geophysical and geological surveys and between the years 1957 and 1960 drilled 10 exploratory wells in different parts of the concession area. These 10 wells, though yielded valuable data of fundamental geologic interest yet could not provide sufficient information regarding the hydrocarbon prospects in the area. The gas shows in almost all the wells, oil shows in Debagram and Jalangi wells and the presence of asphalt in the Burdwan wells were not considered to be of commercial importance. The area, therefore, was relinquished and the project itself was wound up in late 1960. Under the Agreement Government and Standard Vacuum Oil Company were to share the expenditure in the ratio of 25:75 and the Government's total contribution to the project amounted to Rs. 1.84 crores.

2.15. It has been stated that ONGC is exploring again in the West Bengal basin as it was thought that something may have been missed or wrongly understood or interpreted earlier. The Russians advised and Indian experts agreed that this area deserves further exploration. Explaining the position further, the technical expert in the Ministry *viz.* Chief of Exploration Planning & Development who was associated with the Indo Stanvac venture stated "we found that the Stanvac did not evaluate completely certain areas".

2.16. Asked to furnish detailed reasons for conducting surveys in the same areas after the failure of the Indo Stanvac venture, the Government in a written note have stated as follows:

"The West Bengal region explored by the I.S.P.P. forms part of the greater Bengal Basin covering the whole of East Pakistan and parts of Tripura and Surma Valley.

Exploration carried out in East Pakistan by various oil companies has already resulted in the discovery of several commercial gas fields near Sylhet, Chatak, Rashidpur, Kailas Tilla, Titas and other places. Further east, in the Surma Valley, the rocks which are gas-bearing in East Pakistan, contain oil. In fact, oil at 20,000 tons/year was produced from these rocks at Badarpur by the Assam Oil Company. The field was abandoned due to production difficulties. In the light of these facts, there was a general feeling that there is a case for pursuing further exploration in the area.

During 1962-63, the Commission re-examined the available geological, geophysical and drilling data collected by I.S.P.P. This study revealed that:

(a) the Bolpur and Galsi wells were located on the very fringe of the basin where the Eocene and Miocene prospective sections were hardly more than a few hundred feet;

(b) The Ghatal well which was drilled on a circular gravity high, as a carbonate reef prospect within the Eocene, did not have any closure at all, the gravity positive anomaly being due to an anomalous sand build-up;

(c) the fault closures at Burdwan, Debagram and Jalangi locations were of Miocene or post-Miocene origin and there was a possibility that the hydrocarbons, if generated within the basin, had migrated further up-dip before the fault closures were formed;

(d) the Isochron thin, on the basis of which the Memari well was drilled, was not based on very reliable seismic markers;

(c) of the two locations drilled near Ranaghat, the West Ranaghat was better situated to test the hydrocarbon prospects in the Miocene section, but unfortunately the well was abandoned at a premature depth.

(f) the Port Canning location was on the nosal part of a closure. This sequence appears to rise towards Bodra. The drilling data showed that there are high pressure gas and water sands which could not be controlled during drilling.

In addition, a review of the testing results showed that out of the 51 tests carried out in the various wells, 31 tests had indicated presence of gas with blackish water and some free gas.

In short, the assessment made by the Commission indicated that the work carried out by I.S.P.P. should be considered as the beginning and not the end of exploration in West Bengal. On the basis of this, the Commission felt that additional geophysical surveys coupled with drilling might yield hydrocarbons. Similar view was also expressed by the Soviet experts associated with the Commission then.

The Commission has since then, carried out additional seismic surveys in Ranaghat and Port Canning areas. The Commission also decided to and is presently drilling a deep exploratory well near Bodra about 5-6 miles northwest of the Port Canning location."

2.17. The Committee regret that Government spent a sum of Rs. 1.84 crores as their share in the Indo Stanvac Petroleum Project—a joint venture of the Government of India and the Standard Vacuum Oil Company—which proved a failure. It is unfortunate that certain areas in the West Bengal basin where it operated, were not completely evaluated by the Stanvac. In this connection it is significant to note that commercial gas fields have been discovered in East Pakistan which forms part of the greater Bengal basin. The Committee are glad that the Oil and Natural Gas Commission has restarted exploration work in that area. They hope that the exploration programme in that area would be accelerated so as to correctly assess its oil potential as early as possible. This is particularly important as the Haldia refinery which is being set up in that region, would have to depend on imported crude till the domestic supply is ensured.

(ii) *Oil India Limited*

2.18. Government entered into an agreement with the Burma Oil Company/Assam Oil Company to exploit Naharkatiya, Hugrijan and Moran areas in 1958. As a result Oil India Limited was formed in 1959 with the Government having 31 1/3% and Burmah Oil Company/Assam Oil Company 66 2/3% interest. Subsequently by a supplemental agreement dated 27-7-1961, Government and Burmah Oil Company became equal partners in Oil India, Limited. The Company holds roncessions in Upper Assam. The crude produced by Oil India Limited is supplied to the Digboi refinery owned by Assam Oil Company and the two public sector refineries at Gauhati and Barauni. The Committee have examined the working of 'Oil India Limited' and have commented thereon in a separate Report.

D. Land Sedimentary Area and its Exploration

2.19. India has a land Sedimentary area of over one million square kilometres which has prospects of bearing petroleum. An approximate State-wise break up of the above inland sedimentary area is given below:

State	Sq. Km. (Appro.)
Assam (including Tripura and Manipura)	87,700
West Bengal Orissa	87,700
Punjab Himachal Pradesh Jammu & Kashmir	1,29,500
Rajasthan	1,20,435
Gujarat	1,78,315
Ganga Valley (U.P. and Bihar)	3,67,780
Madras	44,030
Andhra Pradesh	24,605
Kerala	15,540
Andaman & Nicobar Islands	7,700
	10,63,305

2.20. Of this, an area of 115,103 sq. km. has been covered by semi-detailed/detailed mapping, 400,000 sq. km. by gravity-*cum*-magnetic seismic surveys and 427,901 sq. km. by reconnaissance/detailed seismic surveys.

2.21. In Gujarat, Assam, West Bengal, Rajasthan and Madras, a total of 71 structures have been discovered so far. 49 out of the structures have been tested by drilling and out of them, 16 have given indications of the presence of oil/gas. Four structures have already been put on commercial production and four more have been found to be commercial and will soon be put on commercial production. In the other oil bearing structures, further exploration is stated to be in progress.

2.22. Asked by what time it was proposed to complete the exploration of all this area, the Government have stated in a written note that as exploration is a continuous process, it may take several decades before a fair idea of the oil potentialities of the entire area can be obtained. The Government, however, purposes to intensify the exploratory and development operations of the Oil and Natural

Gas Commission by increasing the number of seismic parties from 24 at the end of the Third Plan period to 40 in the current Plan period and to drill a total meterage of 1.27 million metres as against 0.69 million metres during the Third Plan period.

2.23. The Committee regret to note that even after two decades of the attainment of independence and the Industrial Policy Resolution of 1948 the progress made by Government in the exploration and assessment of oil potentialities in the land sedimentary areas of the country has been far from satisfactory. Hitherto out of over 10 lakh sq. kilometers of land sedimentary area, 4.3 sq. lakh k.m. has been covered by reconnaissance/detailed seismic surveys, 4 lakh sq. k.m. by gravity-cum-magnetic seismic surveys and only 1.15 lakh sq. k.m. by semi-detailed/detailed mapping. The Committee are unhappy that about one-third of the structures discovered so far, have not yet been tested by drilling. .. .. ..

2.24. The Committee realise that there are various stages in petroleum exploration which is beset with many uncertainties and that heavy capital investment is also required for petroleum exploration and prospecting. Nevertheless it is of paramount importance for a country like India which largely depends on imported crude to develop its own oil resources failing which there will be an ever-increasing drain on the country's foreign exchange resources. It is, therefore, imperative that known sedimentary areas in the country are explored for oil as early as possible. This calls for intensive geophysical and geological surveys and exploratory drilling.

2.25. The Committee feel that a determined bid for an accelerated programme of exploration and prospecting in a big way of all the sedimentary areas of the country is called for. Care should also be taken to avoid delay in testing and assessing the oil potentiality of the structures after they have been discovered.

E. Off-shore Seismic/Drilling Operations

(i) *Gulf of Cambay*

2.26. The Committee have been informed that the O.N.G.C. has undertaken off-shore seismic work with the help of one departmental off-shore seismic party and the aid of a Soviet offshore seismic party. The Soviet Offshore seismic party has operated in the Cauvery Basin, in the Gulf of Kutch, in the Gulf of Cambay, off the coast of West Bengal, the Mahanadi river and the Godavari river. The results have shown that interesting structures exist in the Gulf of Cambay and elsewhere.

Government is now negotiating with foreign oil companies to find a suitable basis for carrying out drilling operations in the Gulf of Cambay.

2.27. Furnishing details of the offshore work conducted so far, the representative of the Ministry stated during evidence that the Oil and Natural Gas Commission had a seismic ship of its own which was working since 1963. In addition the Government had obtained the services of a Soviet seismic ship which worked in the country for about 2½ years from 1964 onwards. Extensive seismic surveys had been delineated and recommended for testing. Preliminary work had also been done in the Cauvery basin, Coromandal coast and Bay of Bengal where the preliminary conclusions pointed to the need for further seismic work. But in the Gulf of Cambay, structures have been delineated and it has been recommended that they should proceed to test the structures. He estimated that the Government would require about 20 million dollars to explore the known prospects in the Gulf of Cambay excluding the expenditure on the drilling by the Oil and Natural Gas Commission in the smaller structures as well as drilling of prospects in the deeper sections of the Gulf of Cambay.

2.28. Asked if the results of the work in the offshore areas of Cambay would help in bridging the gap between the crude production and its requirements by 1970-71 he stated "We have certain proposals under consideration. What decisions will ultimately be reached it is not possible for me to say today. But I do not think, by 1970-71, anything we do now or in the next year can help to bring up any large production. By 1970-71 it may be possible, if we are fortunate to know the results, but what commercial production can be secured, it is difficult to say. I believe it takes anything from four to six years from the time of discovery to exploit commercially."

2.29. On being asked to enumerate the steps taken to carry out drilling operations in the Cambay area, the Government have stated in a written reply that two structures were located in the Gulf of Cambay in 1964 by the Indian Offshore seismic party. Almost immediately after the first structure in the Gulf of Cambay was discovered, negotiations were held with M/s. SNAM S.P.A. for carrying out drilling, using their own mobile offshore drilling platform. A contract with M/s. SNAM was signed on 26.9.64. However, before coming to India, SNAM platform was destroyed in September 1965 while engaged in drilling in the Adriatic sea. As SNAM was not in a position to provide another platform, the contract had to be terminated.

2.30. The ONGC have also considered the possibility of carrying out the drilling operations departmentally with the help of Soviet assistance using a fixed platform. The Soviet authorities have been requested whether they would be in a position to supply certain essential items of equipment as well as certain essential drawings, specifications etc. The position regarding the feasibility of undertaking offshore drilling in the shallower areas with Soviet aid will be known only in the next few months. In the meantime, Oil and Natural Gas Commission was embarking on drilling one of the structures partly in the gulf area and partly under land.

2.31. The Government have also stated that the negotiations with some foreign oil companies for collaboration in offshore exploration in the Gulf of Cambay were in progress and that the negotiations with one of the companies had reached an advanced stage.

2.32. The Committee note from a reply given by the Minister of State in the Ministry of Petroleum and Chemicals in Lok Sabha on the 11th March, 1968 that a team of Russian oil experts visited India during February, 1968. Though their report is awaited, their main recommendations are stated to be:

(i) Off-shore drilling be commenced with on the Aliabet structures of the Gulf of Cambay,

(ii) after gaining experience on the Aliabet structure, off-shore drilling using fixed platforms be carried out on the Tapti structure and later, on the South Tapti structure, and

(iii) increase in the volume of seismic work and training of a large number of Indian specialists on offshore drilling in particular.

2.33. The Committee feel that the progress of drilling operations in the Gulf of Cambay where interesting structures were located in 1964 is slow. It is unfortunate that the contract with M/s. S.N.A.M. S.P.A. for carrying out drilling in that area had to be terminated on account of the destruction of their mobile offshore drilling platform. As there are bright prospects of discovering oil in the Gulf of Cambay area, the Committee strongly urge that negotiations with foreign oil companies for offshore exploration in that area should be expedited. Simultaneously Government should vigorously pursue the feasibility of undertaking departmentally offshore drilling in shallower areas with Soviet assistance.

2.34. The Committee also urge the Government to take expeditious action on the report of the Soviet Team so as to accelerate the pace of off-shore drilling in the country.

(ii) *Persian Gulf Operations*

2.35. The Committee are informed that for the purpose of exploratory operations in the Persian Gulf, a Joint Structure Agreement dated the 17th January, 1965 (effective from 13.2.65) was concluded between the National Iranian Oil Company as the First Party and AGIP, Phillips Petroleum Company and Oil and Natural Gas Commission as the Second Party. The three entities constituting the Second Party formed a joint stock company, *viz.* Iranian Marine International Oil Company (IMINCO) for managing the exploration operations on a no profit no loss basis. The funds required for carrying out the exploration operations were to be provided by the three entities of the Second Party in equal shares.

2.36. The National Iranian Oil Company, however, communicated its disagreement to deal with the Oil and Natural Gas Commission which, they felt, was a part of the Government of India. To overcome this objection, Hydrocarbons India Private Limited was formed as a private limited company, as a subsidiary of the Oil and Natural Gas Commission, which could be a direct party to the Joint Structure Agreement. The Oil and Natural Gas Commission has transferred all its rights and obligations under the aforesaid Joint Structure Agreement to Hydrocarbons India Pvt. Ltd. although it still has the ultimate responsibility for discharging the obligations under the said Joint Structure Agreement.

2.37. The advances made by the ONGC to Hydrocarbons India Pvt. Ltd. upto 31.3.1967 are as under:

Year		Amount of advance (in lakhs of Rs.)
1964-65		560.62
1965-66		157.35
1966-67		324.99
	TOTAL	1042.96

2.38. So far 9 exploratory wells and 1 relief well have been drilled on four structures contained in three blocks, out of 4 blocks assigned to the group under the Joint Structure Agreement. No well has been drilled in the fourth block so far. Wells drilled on Structures "D", "O" and "T" were found dry and had been abandoned. On "R" structure, four wells have been drilled and oil was found in three of them. The commerciality of the production established was being examined.

2.39. During evidence the representative of the Ministry stated that the total area of operations in the Persian Gulf was 8000 sq. kilometres. Asked if the results obtained were commensurate with the investment made, he stated that the Government had reason to believe that the picture was not unpromising and that certain amount of oil would be found there. He expected the country to get oil from this venture latest by 1970. He further stated that India's share of crude oil from source was one-sixth but that the Government had an opportunity to purchase another one-sixth.

2.40. The Committee are glad to note that Government has looked beyond its own frontiers to explore for oil to meet domestic demand. They are happy that Government are hopeful about obtaining oil from the Persian Gulf operations by 1970. In view of the wide gap between production and requirements of crude in the country, the Committee would urge intensification of exploration activities in the Persian Gulf which is stated to have promising possibilities. They hope that the long experience of the other partners in this venture would be of immense benefit in this regard.

F. Established Oil/Gas Reserves

2.41. It has been stated that the country has established a total proved and indicated oil reserves of 154 million tonnes and 63600 million cubic metres of gas. The areas in which these reserves have been established are as follows:

	Crude oil in million tonnes	Natural gas 1000 million cu. metres
1. Oil India Limited	46·6	37·50 (as on 1-1-67)
2. Assam Oil Co.	2·077	0·026 (as on 31-3-67)
TOTAL	48·677	37·526
3. O.N.G.C. (1-10-66)		
Assam	42·59	4·34
Gujarat	65·32	24·38
TOTAL	107·91	28·72
GRAND TOTOL	156·58	66·246

2.42. The Government have stated in a written reply that all the oil bearing areas have not been fully explored and that it would take several decades before all these areas are explored for establishing oil reserves.

2.43. In reply to a question it has been stated that from the areas which have been discovered hitherto the estimate of indigenous crude production by 1970-71 would be 9 to 10 million tonnes, while the requirements would be 20 to 22 million tonnes. Thus there would be a gap of about 11 million tonnes. By 1975-76, the production is roughly estimated at 16 million tonnes and the demand 30 million tonnes. The gap between crude production and demand would thus increase from 11 million tonnes in 1970-71 to about 14 million tonnes in 1975-76.

2.44. The Committee note that the existing proved and indicated oil reserves in the country are capable of giving an annual crude production of about 9 to 10 million tonnes by 1970-71 as against a demand of about 20 to 22 million tonnes by 1970-71 and 30 million tonnes by 1975-76. Thus there will be a wide gap between indigenous production and demand for oil which is estimated at 11 million tonnes in 1970-71 and 16 million tonnes in 1975-76. This underlines the imperative need to intensify the search for oil in the country so as to increase the quantum of the available reserves as early as possible.

III

PRODUCTION OF CRUDE

3.1. There is much more to producing oil than just exploring it. After exploration comes development of the oil field and then production. Delineating the boundaries of the field, assessing the character of the rocks through which the oil is expected to flow, collecting data about the properties of oil to be tapped and also about the gas above and the water below oil are imperatives for planning the production. The pressure in the "oil reservoir", the rate at which this pressure is likely to fall, the ratio of oil and gas in the crude, the pressure at which the two are likely to separate—all this must be known before production is started.

A. Targets and Achievements during various Plan Periods

3.2. At the time of independence in 1947 the only crude producing field was the Digboi field in Upper Assam, which was owned by the Assam Oil Company in the private sector. It was producing 2·52 lakh tonnes of crude oil per annum. In May, 1952 Naharkotia well No. 1 was spudded and oil production started from this field in 1954 which was being supplied to the Digboi refinery of the Assam Oil Company. Later in 1956 the Moran field in Assam was also discovered. As already stated Oil India Limited—a joint venture of Government of India and Burmah Oil Company—was incorporated in 1959 to explore and produce oil in Assam.

(i) *Targets during the First and Second Plans*

3.3. It has been stated that no targets were laid down in the First and Second Five Year Plans for production of crude, in the private sector. The Assam Oil Company produced 1·35 million tonnes and 1·18 million tonnes during the First and Second Plan periods respectively while Oil India Limited produced 0·56 million tonnes of crude during the Second Plan period. A table giving the production of crude during the First and Second Plan in the country by these companies is given below:

(In million tonnes)

Plan	Production A.O.C.	Production O.I.L.	Total Production
First	1·35		1·35
Second	1·18	0·56	1·74
TOTAL	2·53	0·56	3·09

3.4. There was no indigenous production of crude in the public sector during the First two Plan periods as the ONGC, the only public sector organisation engaged in the exploration and exploitation of the hydrocarbons resources of the country, started production only in 1961.

3.5. The Committee regret to note that there was no production of crude oil in the public sector during the first two Plan periods. This is not a happy reflection on the Government's role in the implementation of the Industrial Policy Resolution 1948 regarding setting up of new undertakings in this field of mineral oil in the public sector. Had the Oil and Natural Gas Commission been set up soon after 1948 or even in early fifties, it would perhaps have been possible to produce crude on a commercial scale in the public sector at least during the Second Plan period.

(ii) *Targets during the Third Plan Period*

3.6. The target and achievement regarding production of crude by the O.N.G.C. in the public sector during the Third Plan period have been as under:

(i) Original Target 6.00 million tonnes

(ii) Mid-term Appraisal 4.68 million tonnes

(iii) Achievement 3.42 million tonnes.

3.7. In the private sector, the Third Five Year Plan envisaged that Oil India Limited would be in a position to produce about 2.75 million tonnes by the end of the Plan *i.e.* :75 million tonnes for the

Gauhati refinery and 2 million tonnes for the Barauni refinery. This target is stated to have been duly achieved. The actual production was, however, restricted to the actual offtake by the Government refineries at Gauhati and Barauni. No targets were fixed for the Assam Oil Company whose field was a declining one. The actual production by the Oil India Limited and Assam Oil Company during the Third Plan period was 5.15 million tonnes and 0.88 million tonnes, respectively.

3.8. The shortfalls in the achievements of the targets of production in the public sector during the Third Plan are attributed by the Government to two main factors. First exploration of Kalol, Navagaon and Rudrasagar fields proved to be much more complex operation than assumed in the beginning. Exploration effort became quite intensive and the proving of the reserves and the preparation of a development plan for these three fields took much longer. The other factor was that the Gujarat refinery went on stream only towards the end of the Third Plan period in October/November, 1965, *i.e.* about 12 months later than originally estimated. The oil at the Ankleshwar field had therefore to be kept underground as there were no offtakes excepting one million tonnes annually that was being sent to the Bombay refineries.

3.9. Elucidating further the Secretary of the Ministry stated during evidence that "Targets were fixed in 1961 when some discoveries had just taken place and there was a mid-term appraisal. These targets were revised in 1963. In 1963-64 we had come to know that these are areas which require much greater exploration before a scientific development plan could be formulated. So in 1961 it was an eager hope based on initial discovery. Perhaps this also emphasises the need to take these forecasts of expected or anticipated oil production targets with some degree of conservatism."

3.10. The Committee observe that there has been heavy shortfall in the production of crude oil in the public sector during the Third Five Year Plan. Compared to the original target of 6 million tonnes the actual production was 3.42 million tonnes i.e. about 56 per cent. This achievement fell far short of even the target of 4.68 million tonnes fixed at the time of mid-term appraisal. It is regrettable that this shortfall is partly attributed to the delay of about 12 months in the commissioning of the Gujarat refinery on account of which oil at the Ankleshwar field had to be kept underground. The Committee are concerned to note that the shortfall in the production of crude by the Oil India was also due to the inability of the Government refineries at Gauhati and Barauni to lift the stipulated quantities of crude. These failures of the refineries in the public

sector to adhere to the scheduled timings of commissioning resulted in non-utilisation of the crude production capacities created at considerable costs. These instances underline the importance of closer coordination between inter-related industries and call for determined efforts by all concerned to adhere to the schedules with a view to avoid idle capacities and consequential losses. The Committee urge that Government should also keep a close watch on the progress of interlinked industries so as to avoid a recurrence of such matters.

3.11. The Committee would further like to emphasise that every care should be taken by Government to fix realistic targets and to ensure that once the targets have been fixed, all efforts are made to achieve them.

(iii) *Targets for the Fourth Plan Period*

3.12. In the preliminary material furnished to the Committee, it has been stated by Government that the Fourth Five Year Plan of the ONGC originally envisaged a production target of 6.5 million tonnes of crude per annum with a cumulative production of 22.5 million tonnes during the Plan period as under:

(Million tonnes)

Annual Production by 1970-71		
Ankleshwar	2·65	
Kalol	0·8	
Navagam	0·25	3·7 (Gujarat)
Rudrasagar	0·80	
Lakwa	2·00	2·80 (Assam)
TOTAL		6·50
Cumulative production during 4th Plan		
Ankeshwa	12·75	
Kalol	2·89	
Navagam	0·86	16·50 (Gujarat)
Rudrasagar	2·05	
Lakwa	3·95	6·00 (Assam)
TOTAL		22·50

3.13. According to the information furnished by the Government subsequently, it has been stated that ONGC expects to establish an annual production rate of 6.23 million tonnes of crude oil by the end of 1970-71 and to obtain a cumulative production of 19.2 million tonnes of crude oil during the five years of the Fourth Plan as against the earlier estimates of 6.5 million tonnes per year rate and 22.5 million tonnes cumulative production.

3.14. As regards the private sector, it has been stated that from April 1966 to 31-8-1967, the Oil India has produced 3.39 million tonnes and Assam Oil Company 0.21 million tonnes of crude. From 1968 onwards Oil India is expected to produce at the rate of 3 million tonnes per annum provided the Government refineries are in a position to lift the same.

3.15. The Committee are unhappy at the scaling down of the target of cumulative production of crude by 1970-71 in the public sector from 22.50 million tonnes to 19.2 million tonnes and the rate of annual production from 6.50 million tonnes to 6.23 million tonnes in 1970-71. In view of the annual requirements of 20-22 million tonnes of crude for various refineries in the country by 1970-71 and the anticipated gap of about 11 million tonnes between requirements and indigenous supply, they cannot but consider this reduction in the targets as unfortunate. It is hoped that Government would spare no efforts to reduce this gap as much as possible by determined efforts to increase the output of indigenous crude. The Committee would therefore strongly emphasise the imperative need of upward revision of targets of crude production in the country by intensifying exploration, prospecting and development efforts in this field.

B. Perspective Planning

3.16. The Committee have also been informed that the Government have not prepared any production plan, beyond 1970-71 as it was felt that such a plan could not be drawn up concretely as it depended on the results of the exploration work to be undertaken in the various parts of the country. According to the Government it was unlikely that India could produce by 1971 all the crude oil needed for the Indian refineries.

3.17. During evidence the representative of the Ministry stated that by 1970-71 the indigenous crude production would be around 10 million tonnes against an estimated requirement of 20 to 22 million tonnes. The Government had a rough idea that by 1975-76 the production might be about 16 million tonnes against a demand of 30 million tonnes i.e. the gap would be increasing from 11 million tonnes in 1971 to 14 million tonnes by 1976. He put the foreign exchange expenditure in 1970-71 for import of 11 to 12 million tonnes of crude at approximately Rs. 110 crores. It may also be stated that as against the Government's demand estimate of about 30 million tonnes by 1975 the Indian Institute of Petroleum has recently estimated the requirement of 32 million tonnes refinery capacity by 1975.

3.18. The Committee note that Government have not prepared any long term perspective plan for the indigenous production of crude. While conceding that there may be difficulties in the preparation of such a plan, it is nevertheless desirable that Government should have a broad idea of the long term objective in this field for which a plan of action should be prepared well in advance. Considering the heavy outgo of foreign exchange on crude imports which is estimated at Rs. 110 crores annually by 1970-71, it is all the more essential for Government to aim at self-sufficiency in crude production which calls for long term planning for extensive and intensive geophysical and geological surveys and exploratory drilling etc. The Committee therefore strongly urge that Government should prepare a perspective plan covering a period of 15 to 20 years which should aim at maximising indigenous production of crude so as to reduce crude imports to the minimum. As exploration and production of crude is a long process and is full of uncertainties, the need for a perspective plan becomes all the more greater. The Committee recommend that immediate action should be taken by Government towards this end.

C. Production of Crude by the Oil and Natural Gas Commission in the Eastern Zone

3.19. Oil was struck by the Oil and Natural Gas Commission in Rudrasagar structure in January, 1961 and in Lakwa structure in February, 1965 since then a number of wells are stated to have been drilled on these structures.

3.20. As per figures furnished by the Government the established crude reserves in the Eastern Zone *viz.* Assam are as under:

Oil India Ltd.	46·6 million tonnes.
Assam Oil Company	2·077 million tonnes.
Oil and Natural Gas Commission .	42·59 million tonnes.

3.21. The production of crude by Oil India Limited from their fields at Naharkatiya and Moran was 2.14 million tonnes in 1966. The production capacity of these fields was already stated to be 2.75 million tonnes which could not be achieved on account of lesser offtake by the Gauhati and Barauni refineries. The present capacity of the Oil India Limited is 3 million tonnes per year.

3.22. As regards production by the Oil and Natural Gas Commission, commercial production from Lakwa is expected to start from the summer of 1968. For this purpose a pipeline is being laid from Lakwa to the installations of Oil India Limited at Moran. From Moran, the Lakwa crude will be transported to the refineries at Gauhati and Barauni through Oil India's crude oil pipeline.

3.23. Test production on a small scale was started from Rudrasagar from March, 1966 at the rate of about 100 tonnes/day. The oil is being transported by rail to the Gauhati refinery. A pipeline is expected to be laid from Rudrasagar either directly to Moran or to Lakwa where Rudrasagar crude will be blended with the Lakwa crude and then pumped to Moran. This is expected to materialise during the end of the year 1969 when commercial production from Rudrasagar is expected to commence.

3.24. By the end of Fourth Five Year Plan, the Lakwa and Rudrasagar fields are together expected to yield between 1 million and 1.5 million tonnes per year.

3.25. The Committee note that while the Oil India Limited and the Oil and Natural Gas Commission have established crude reserves of almost the same level in the Eastern Zone their annual rates of production *viz.* 3 million and 1.5 million tonnes respectively vary widely. The Committee are unable to understand why the production of crude per year by the Oil and Natural Gas Commission should be only half of the Oil India Limited. They feel that with more vigorous efforts it should be possible to improve production of crude in the Rudrasagar and Lakwa fields. The Committee understand that the crude requirements of the Haldia refinery and the third million tonne requirements of the Barauni refinery are proposed to be met by imports. The Committee consider that having established sufficient proved and indicated oil reserves in the Eastern Zone of the country, it should be Government's endeavour to meet the full crude requirements not only of the Barauni refinery but of the Haldia refinery also from indigenous sources. They, therefore, emphasise the imperative need to intensify commercial

production of crude from the Rudrasagar and Lakwa fields of the Oil and Natural Gas Commission, so as to meet the crude requirements of Barauni and Haldia refineries from these sources, as soon as possible. At the same time the Committee would also like the Government to study and examine the question of transporting this crude to these consuming centres.

IV

PRODUCTION OF PETROLEUM PRODUCTS

4.1. The crude oil that is produced at the well-head cannot be readily used. Aviation gasoline, motor spirit, kerosene, high speed diesel, light diesel oil, lubricating oil, heavy fuel oil, asphalt that are sold in the market are all derived from crude oil by a series of processes. All these processes are collectively known as refining. Refining does not mean only the removal of impurities. In the modern context, it means separating oil into a number of fractions as well as refining.

4.2. The consumption of petroleum products in the country has increased rapidly since independence. From four million tonnes in 1951, it increased to 5.5 million tonnes in 1956, 8.4 million tonnes in 1961 and 13 million tonnes in 1966. It is expected to increase to about 22 to 23 millions by 1971 and to about 30 million tonnes by 1975. The production of petroleum products in the country on the other hand was :25 million tonnes in 1951, 3.9 million tonnes in 1956. 6 million tonnes in 1961 and 10 million tonnes in 1966. It is expected to increase to 20 million tonnes in 1971 and to 30 million tonnes in 1975.

4.3. A total of eight refineries with a capacity of over 15 million tonnes are at present operating in the country—four in the private sector and four in the public sector. The particulars of these refineries together with their present capacity are given below:

(i) **Private Sector**

	Commis-sioned	Present capacity (in million tonnes).
1. A.O.C. Digboi Refinery	1901	0·50
2. ESSO Refinery	1954	2·50
3. Burmah Shell Refinery	1955	3·75
4. Caltex Refinery	1957	1·55
		8·30

(ii) **Public Sector**

	Commissioned	Present capacity (in million tonnes)
1. Gauhati Refinery	1962	0·80
2. Barauni Refinery	1964	2·00
3. Gujarat Refinery	1965	2·00
4. Cochin Refinery	1966	2·35
		7·15

4.4. Three refineries in the private sector *viz*. Burmah Shell, ESSO and Caltex and the Cochin refinery in the public sector are based on imported crude. The other four refineries *viz*. Digboi in the private sector and the three refineries in the public sector *viz*. Gauhati, Barauni and Koyali are based on indigenous crude.

4.5. The main products which are now produced by each of these refineries in the country are as follows:

Private Sector Refineries

Assam Oil Company Ltd.

Motor Gasoline
Kerosene Superior
Kerosene Inferior
High Speed Diesel
Light Diesel Oil
Furnace Oil/Tea Driver Oil
Bitumen
Lube Oil
Wax
Petroleum Coke

Caltex Oil Refinery (India) Ltd.

Motor Gasoline
Kerosene Superior
High Speed Diesel
Light Diesel Oil
Furnace Oil

Naphtha
Liquified Petroleum Gas
Mineral Turpentine

Burmah-Shell Refineries Ltd.

Motor Gasoline
Kerosene Superior
Aviation Turbine Fuel
High Speed Diesel
Light Diesel Oil
Furnace Oil
Carbon Black Feed Stock
Jute Batching Oil
Bitumen
Liquified Petroleum Gas
Naphtha
Mineral Turpentine
Refinery Gas

ESSO Standard Refining Co.

Motor Gasoline
Kerosene Superior
Aviation Turbine Fuel
High Speed Diesel
Light Diesel Oil
Furnace Oil
Hot Heavy Stock
Jute Batching Oil
Bitumen
Liquified Petroleum Gas
Naphtha
Hexane
Special Boiling Point Spirit
Refinery Gas

Public Sector Refineries

Gauhati Refinery

Motor Gasoline
Kerosene Superior
Kerosene Inferior
High Speed Diesel
Light Diesel Oil
Furnace Oil
Iomex
Petroleum Coke

Barauni Refinery

Motor Gasoline
Kerosene Superior
Aviation Turbine Fuel
JP-4
High Speed Diesel
Light Diesel Oil
Low Sulphur Heavy Stock
Liquified Petroleum Gas
Petroleum Coke
Mineral Turpentine
Naphtha
Bitumen
Lubricating Oils

Gujarat Refinery

Motor Gasoline
Kerosene Superior
Ethylised Gasoline
JP-4
High Speed Diesel
Low Sulphur Heavy Stock
Light Diesel Oil
Aviation Turbine Fuel

Cochin Refinery

Motor Gasoline
Kerosene Superior
High Speed Diesel
Light Diesel Oil
Furnace Oil
Naphtha
Bitumen

A. Production of Petroleum Products during Plan periods

(i) *Performance in the Private Sector*

4.6. At the commencement of the First Plan, practically the entire demand of the country for petroleum products was met by imports, as the output of M/s Assam Oil Company's refinery at Digboi amounted hardly to about 5 per cent of the requirements. The First Plan provided for the establishment of three refineries based on imported crude oil and two of them *viz.* those of M/s. Standard Vacuum Oil Company and M/s Burmah Shell were commissioned in August, 1954 and January, 1965 respectively. The third refinery at Vishakhapatnam belonging to the Caltex organisation went on stream in April, 1957. The original installed capacity of the three coastal refineries at Bombay and Vishakhapatnam was 2.92 million tonnes in all. Thereafter these refineries were allowed to increase their throughput capacity gradually. As a result, the capacity of these refineries in the private sector increased from 2.92 million tonnes to the present capacity of 7.80 million tonnes as indicated below:—

(Million Tonnes)

	Changes in capacity with dates			Present capacity
ESSO . .	0·92 (11/51)	1·21 (4/52)	2·50 (1/63)	2·50
Burmah Shell .	1·50 (12/51)	2·00 (4/52)	3·75 (1/63)	3·75
Caltex . .	0·50 (3/53)	0·675 (11/54)	1·05 (10/62)	1·55
			1·55 (1/68)	
	2·92			7·80

4.7. The following statement shows the production of petroleum products in the private sector during each year of the first three Plan periods and the estimates for the Fourth Plan period:

('000 tonnes)

Year	Light Distillates	Kerosenes	Diesels	Heavy Ends	Bitumens	Lubri-cants	Others	Total
1	2	3	4	5	6	7	8	2
I Plan								
1951	51	58	41	17	4	24	52	250
1952	44	56	46	22	5	16	45	234
1953	49	59	48	16	6	17	51	246
1954	162	85	139	189	6	17	56	655
1955	797	449	592	1008	85	17	76	3024
II Plan								
1956 .	964	546	712	1417	165	17	71	3892
1957 . .	1041	618	927	1599	176	17	69	4447
1958 . .	986	443	1191	1649	226	19	58	4772
1959	949	735	1416	1679	290	22	62	5153
1960 . . .	1048	941	1644	1644	399	22	49	5747

1	2	3	4	5	6	7	8	9
III Plan								
1961	1080	1023	1743	1733	438	25	48	6090
1962	1168	1161	1801	1835	367	26	33	6391
1963	1336	1357	1924	2169	374	36	46	7242
1964	1379	1516	1786	2391	495	41	42	7650
1965	1363	1376	1984	2429	549	42	43	7786
IV Plan								
1966	1419	1253	2204	2590	538	58	36	8098
1967*	1363	1376	1984	2427	549	58	43	7800
1668*	1363	1376	1984	2427	549	58	43	7800
1969*	1363	1376	1984	2427	549	58	43	7800
1970*	1419	1253	2204	2492	538	58	36	8000

*Estimated.

4.8. It will be seen that the production of petroleum products in the private sector refineries which was 0.25 million tonnes in 1951, increased to 3.89 million tonnes in 1956, to 6.09 million tonnes in 1961 and to 8.09 million tonnes in 1966.

4.9. As has already been stated all the refineries in the private sector (except the Digboi refinery) refine imported crude. Government have however stated that the net foreign exchange saving per tonne in refining imported crude instead of importing a tonne of refined petroleum product ranges between Rs. 31 and Rs. 46.

4.10. The Committee note the phenomenal increase in the quantity of petroleum products produced in the private sector. From a small beginning of :25 million tonnes at the start of the First Plan, the petroleum products increased to 3:9 million tonnes by the end of the Plan period and thereafter registered an increase of about 200 per cent by the end of the Third Plan. Out of the total indigenous production of about 11:5 million tonnes of petroleum products in the country in 1966-67, the share of private sector was about 8 million tonnes i.e. **about 70 per cent. This has not only helped in meeting the Petroleum, Oil Lubricants (P.O.L.) requirements of the country indigenously but has resulted in considerable saving of foreign exchange which would otherwise have to be spent in importing refined products which are costlier than the imported crude.**

(ii) *Shortfalls in the Public Sector Refineries*

4.11. The four public sector refineries in operation at present, the dates when they went on stream and their present capacities are as under:

Refinery		Date when went on Stream	Present capacity (in million tonnes)
Gauhati		1-1-62	0·75
Barauni	First million tonne unit	January, 1965	2·00
	Second million tonne unit	September, 1966	
Gujarat	First million tonne unit	October, 1965	2·00
	Second million tonne unit	October, 1966	
Cochin		September, 1966	2·35

In addition two other refineries viz. the Madras Refinery and Haldia Refinery are expected to go on stream during the Fourth Plan period.

4.12. The following statement shows the targets|achievements in the production of petroleum products in the public sector refineries since the first one at Gauhati went on stream:

(In. '000 tonnes)

Year		Light Distillaries	Kerosenes	Diesels	Heavy Ends	Others	Total	
1962-63	T	81·8	49·6	173·2	46·6	28·0	379·2	
	A	47·2	47·2	111·1	38·3	19·5	263·3	
1963-64	T	135·0	98·0	238·0	65·0	79·0	615·0	
	A	113·9	94·0	202·4	50·5	32·0	492·8	
1964-65*	T	170·0	108·0	273·2	82·4	48·4	682·0	*Barauni Refinery's trial run period.
	A	210·1	119·7	375·8	93·4	58·2	857·2	
1965-66	T	367·5	184·6	591·4	166·9	86·4	1396·8	
	A	326·7	169·7	376·2	180·3	90·5	1343·4	
1966-67@	T	1190·7	1115·9	1819·3	1123·7	334·9	5584·5	@Gujarat Refinery's trial run period.
	A	865·9	663·1	1332·2	802·6	77·0	3740·7	

T = Target.
A = Achievement.

4.13. It will be observed from the above statement that except for the year 1964-65 the actual performance of the public sector refineries has all along been much below the targets laid down. It will further be seen that during the years 1966 and 1967, the actual production in the Barauni and Gujarat refineries has been much below the rated capacity.

4.14. The following figures indicate the capacities for which the four public sector refineries have been licensed and their corresponding levels of operation during 1966 and 1967:

(Figures in million tonnes)

Name of Refinery	Capacity as licensed in terms of Industries (Dev. & Regulation) Act	Crude Throughput		Reasons for Shortfalls against licensed capacity
		1966	1967	
Gauhati	0·75	0·74	0·80	
Baruani	2·00	1·05	1·57	Second million tonnes units went into regular operation from September & October, 1966 respectively.
Gujarat	2·00	1·23	1·71	
Cochin	2·35	0·45	2·26	Refinery commissioned in September, 1966 and attained full scale production rate with effect from 26-5-1967.

4.15. Explaining the reasons for shortfall since 1962-63, it has been stated by Government that during 1962-63 and 1963-64, the only public sector refinery in operation was I.O.C's Gauhati Refinery. The shortfall in production during the first of these years at Gauhati was due to troubles in the kerosene refining unit and the limited offtake of products as a result of the same. These persisted during the first few months of 1963-64 also. An added difficulty in the latter year was regarding break-down in water supply due to an unprecedented shift in the course of Brahamputra river from the intake point.

4.16. During 1965-66 and 1966-67 Barauni and Gujarat refineries went on stream one after the other and the overall shortfall was largely due to the fact that these two refineries were having certain initial "teething" troubles.

4.17. Barauni refinery could not operate at the designed capacity during 1966 for many reasons, the main of which were the non-commissioning of lube oil plant and a limited market for L.S.H.S., which meant that the upliftment of some of the products turned out from the refinery was not to the extent envisaged. In Gujarat refinery, the shortfall in throughput was due largely to poor and erratic upliftment of L.S.H.S. by Dhuvaran power station. The shortfalls in these refineries have been reduced to a great extent during 1967.

4.18. Elaborating the reasons for shortfalls in production in the public sector refineries, the Secretary of the Ministry of Petroleum and Chemicals stated:

> "The targets were fixed with reference to estimated start up. The start up has been delayed in some cases. Secondly the targets were fixed on certain assumptions which our technical collaborators supported—that the refineries would be able to go into full production by such and such time, but some of these assumption were again not borne out .... I would not like to say that we have fulfilled our responsibility hundred per cent. Just as defaults or delays have occurred in the discharge of responsibility by our collaborators, we may have also erred.......... The problems of delay and teething troubles may at worst set us back by a year or a year and half, it is not a continuing problem. After that the plants will be worked to optimum operating capacity."

4.19. The Chairman of I.O.C. also attributed the shortfalls in production in the public sector refineries to initial delays in completion of the projects and the teething troubles. He stated that the refineries in the private sector had been working for a number of years and so their production has been stabilised. He thought that Gauhati refinery was more or less stabilised and that Barauni refinery was also getting stabilised. In Koyali there is difficulty due to

Dhuvaran power house but the I.O.C. is keen to touch the target soon.

4.20. The Committee regret to observe that there have been shortfalls in production of the public sector refineries since 1962 when the first refinery at Gauhati went on stream. They note that these shortfalls have been attributed to initial delays in the completion of the different units of the refineries as a result of which the main units of the plants could not be operated uninterrupted, and also that there have been teething troubles with all these refineries. The Committee regret that there have been defaults and delays on the part of the foreign collaborators also and that in the case of Gujarat refineries the shortfalls have been mainly due to the problems of disposal of the by-products of the refinery.

4.21. The Committee have no doubt that Government would profit by the experience gained in the setting up of the three refineries at Gauhati, Barauni and Gujarat and would take timely measures to ensure that the Madras and Haldia refineries are commissioned on schedule and start production according to their rated capacity as early as possible.

(iii) *Fourth Plan Targets*

4.22. The target of petroleum products included in the draft outline of the Fourth Plan provides for the production of 20 million tonnes of petroleum products by 1970-71. This is proposed to be achieved by the addition of two new refineries—one at Madras and another at Haldia near Calcutta with a total capacity of 5 million tonnes per annum. These two refinery projects are likely to cost Rs. 90 crores. The Fourth Plan provides, for a total investment of Rs. 84.20 crores on account of the Madras refinery, Haldia refinery and a new refinery which is to be started in the North-West region. The Plan also provides for a spill-over in the investment on account of the Barauni, Gujarat and Cochin refinery to the extent of Rs. 5·30 crores.

4.23. Regarding the Fourth Plan provision of Rs. 84·20 crores on account of Madras, Haldia and North West refineries, it has been stated that the Madras refinery project is now under execution and the project is expected to be completed by early 1969. The Haldia refinery may be commissioned during 1970-71. The North West refinery project has been studied with reference to the product mix and location of the refinery. Work on the project may start late in the Fourth Plan.

4.24. The targets to be achieved during the Fourth Plan in respect of the public sector refineries are as follows:

(figures in '000 tonnes)

	1966	1967	1968	1969	1970
Gauhati	850	850	850	850	850
Barauni	1250	2000	2750	3000	3000
Koyali	1500	2000	2750	3000	3000
Cochin	500	2000	2300	2300	2300
Madras .	..	..	..	1750	2500
Haldia	..	..	..	..	1000
	4100	6850	8650	10900	12650

4.25. The Committee would like the Government to take all necessary steps to ensure that the production targets laid down for each refinery in the public sector are adhered to in actual practice.

B. Losses suffered by Gujarat Refinery on account of less offtake of Low Stock Heavy Sulphur by Dhuvaran Thermal Station

4.26. As already stated Gujarat refinery has been ready to operate at 2 million tonne capacity since June, 1966 but one of the bottlenecks has been the disposal of L.S.H.S. because of less offtake by Dhuvaran Thermal Station.

4.27. As per information furnished by Gujarat refinery to a Study Group of the Committee the details of losses suffered by the refinery on account of low offtake of L.S.H.S. by Dhuvaran have been estimated as under:

(Rs. in lakhs)

	April 67 to Sept. 1967	Oct. 57 to March 1968	Total
1. Loss due to less processing of crude	33·37	36·66	70.03
2. Loss in foreign exchange due to less superior kerosene production .	78·78	86·64	165·42

4.28. Asked if it has been ensured that Dhuvaran's offtake will be fully restored by March, 1968, the Managing Director (Refineries Division) of the I.O.C. stated during evidence that the position was now better as Dhuvaran was now taking nearly 880 tonnes a day which is what they were committed to take from the 2 million tonne stage of the refinery. Asked if the contract does not have a penalty clause to save I.O.C. from such losses, he stated "We have never had penalty clauses either in this agreement or in any other agreement with Government organisations or undertakings. Of course they (Dhuvaran) have had some failures. Even if penalty clause had been there, the *force majeure* clause would have saved them from being penalised."

4.29. Elucidating further the representative of the Ministry of Petroleum and Chemicals stated that in the circumstances that prevailed in Gujarat any such penal clause would have been infructuous as that would have been treated as a situation of *force majeure* whereby penalty clause becomes inoperative. While legally it was possible to insert it there was a practical difficulty in negotiation for insertion of such a clause while dealing with a Government agency.

4.30. Asked what the practice in the private oil companies was, the Managing Director (Marketing Division) of the I.O.C. stated that there were penalty clauses in private oil company's agreements but he thought that in the case of a break-down of supplies for example, to such a large thermal plant, the company could not have implemented or enforced the penalty clause. Insertion of penalty clause was a matter for negotiations between the buyer and the supplier. In certain cases the buyer does not accept a penalty clause.

4.31. In this case there was only one customer and the Secretary of the Ministry admitted during evidence that the question of a penalty clause was not discussed.

4.32. The Committee are unhappy about the losses suffered by the Gujarat refinery on account of less offtake of Low Stock Heavy Sulphur (L.S.H.S) by Dhuvaran Power House, which restricted the refinery's crude throughput for a long time resulting in considerable loss. The Committee are surprised to note that there is no penalty clause in the agreement between the refinery and Gujarat State Electricity Board regarding the supply of L.S.H.S. to the Dhuvaran Power House. It may be that the penalty clause would not have been operated in the present case which is stated to be 'Force Majeure' but what is surprising is that in this particular case, the question of insertion of a penalty clause was not at all considered.

4.33. The Committee suggest that in such cases Government should consider the feasibility of including a penalty clause for failure of the party to carry out its obligation made in the contract.

C. In-built Capacity in Refineries

(i) Private Sector

4.34. The original and the existing capacity of the three coastal refineries in the private sector is given below:

(million tonnes)

	Original capacity	Present capacity (1967)
	(as per Co.'s first letter)	
1. Burmah Shell Refinery, Bombay .	1·50	3·75
2. ESSO Refinery, Bombay	0·92	2·50
3. Caltex Refinery, Vishakhapatnam . . .	0·50	1·55
	2·92	7·80

It will be seen that the rated capacity in the three refineries has been increased by more than 2½ times over the years.

4.35. Asked about the reasons for the increase in the capacity of these refineries, it was stated by the representative of the Ministry of Petroleum and Chemicals during evidence that "the refineries were designed or at least reported to have been designed for the capacities approved. There is always about 10-15 per cent reserve but over the years they have done various modifications, debottlenecking and so on which they claim has increased the capacity to almost twice. Elucidating further, the Secretary of the Ministry said that "So far as the private sector goes it is not improbable that initially these refineries had large in-built additional capacity. At the same time they have also done a number of maintenance and other improvement jobs and increased their pumping and other capacities which if done in our refineries can also increase our capacity upto 40 per cent."

4.36. Asked what was the machinery in the Ministry to check that the private sector refineries were conforming to the licensed capacity and that they were not over-designed the representative of the

Ministry of Petroleum and Chemicals stated during evidence "There are two aspects of this matter. At what level do they operate from time to time? This is fully under our control because it is we who permit the quantities of crude which they can process. To that extent we are able to control the actual throughout. The second aspect of it is actual design and erection of the refinery. In the past, one must confess, this aspect of the matter may not have been adequately looked after. But today in dealing with sizing of refinery equipment, in dealing with the import licensing of plant and equipment, compressors etc. adequate care is taken both in our Ministry and in the Directorate General of Technical Development to ensure as far as possible—I cannot say this is a fool proof arrangement—that excess capacities are not built into plant licensed to certain levels."

4.37. As regards ensuring that the private sector refineries imported crude only to the extent they were licensed and not beyond, he stated that based on a certain price the Government "releases certain amount of foreign exchange within which import must take place. It is the responsibility of the port trust and customs authorities to ensure that measured quantities not in excess of those licensed are in fact imported." According to him there was no likelihood of more crude coming to India than is paid for. He added that the Government also studies every month refinery runs, product, availability etc. and tries to ensure that production is proportionate to what is imported.

4.38. Asked if these refineries had approached Government regarding expansion of capacity the Secretary of the Ministry of Petroleum and Chemicals stated "Expansion of capacity through capital investment is a matter which requires Government approval. To my knowledge, these refineries have not come to seek our permission. They have been telling us that they have carried out some improvements essentially in the nature of revenue expenditure changing a pump here or a pipeline there.... In future we can adequately control such things.

4.39. The Committee learn with concern that expansion of the refineries in the private sector was carried out without the approval of Government inasmuch as Government's permission was not sought for capital investment for this purpose. The Committee are doubtful that the capacity of the refineries can be increased to about two times with minor modifiactions and improvements only unless the additional capacity was contemplated and built into the original plant and equipment itself.

4.40. The Committee cannot help concluding that Government had not taken sufficient care in the beginning to check over-designing of capacities of refineries in the private sector. What the Committee feel more concerned about is that even now the existing machinery and arrangement for exercising checks regarding over-designing of plants are not fool proof as admitted by the Secretary to the Ministry during evidence. This is a serious matter as the very purpose of licensing and regulation of industries is vitiated by such irregular expansions and the Government is at times faced with a fait acompli.

4.41. The Committee, therefore, strongly recommend that Government should immediately evolve a suitable machinery to ensure that no industrial unit is able to increase its licensed capacity in this manner without prior approval of the Government.

(ii) *Public Sector Refineries*

4.42. The Committee have been informed that there is an in-built capacity in the Gauhati refinery which was designed for 75 million tonnes per annum. It is presently operating at a through-put of 0·85 million tonnes per annum.

4.43. Asked as to why the public sector refineries have not been provided with additional 100% in-built capacity as has been done by the private sector refineries, the representative of the Ministry of Petroleum and Chemicals stated during evidence that "I do not think it is correct to say that the private refineries were designed with 100% in-built reserve. Our note probably gives that impression. I think the refineries were designed for the capacities approved. There is always about 10-15% reserve but over the years they have done various modifications, debottlenecking and so on which they claim has increased the capacity to almost twice. ......After 10 years I have no doubt public sector refineries will have increased throughput, of course with certain additional investments and they will have increased facilities, more pumping capacity, more compressors, large sizes of pipelines, some readjustment of distilling column—all these things that have been carried out in these private refineries." He added that "we can work Gauhati at 15% increased capacity. We have operated it upto 0·85 million tonnes at times without any change. With small investments, the capacity of Gauhati refinery can be increased to 1·1 million tonnes but the matter was under examination as I.O.C. was likely to suffer certain economic disadvantages if the capacity of Gauhati refinery was extended to that level."

4.44. Elucidating further the witness stated that "Cochin refinery is designed for about 2·3 or 2·4 million tonnes. We deliberately went about designing the main distillation column for a capacity of 3½ million tonnes because we feel that in five years time we may be reaching that capacity. This was done at an extra cost of about 3 lakh dollars". It was added that it will save a lot of money when the refinery is expanded further.

4.45. The Committee are constrained to observe that while the private sector refineries appear to have been originally designed with additional in-built capacities which were later on expanded with very little cost, no such in-built capacities were provided in the public sector refineries with the result that their capacities are now being increased at considerable additional costs. The Committee urge that in designing the Madras and Haldia refineries, this aspect will be kept in view. The Committee would further suggest that the feasibility of maximising the output from the existing refineries by changes in processes, may be examined. They hope that continuous attention would be paid to explore possibilities of applying new developments in petroleum refining to the existing processes, with a view to increase the refinery throughput as much as possible.

D. Refinery Location

4.46. Of the eight refineries operating in the country at present in the public and private sectors together, four have a coastal location and the other four are situated in inland areas. The following statement shows the location of the refineries with their present refining capacities:

(in million tonnes)

	Present Capacity
Coastal	
Burmah Shell (Bombay)	3·75
ESSO (Bombay)	2·50
Caltex (Vishakhapatnam)	1·55
Cochin	2·30
Inland	
Gauhati	0·80
Barauni	2·00
Gujarat	2·00
A.O.C.	0·50

4.47. Two more refineries of 2.5 million tonnes capacity each *viz.* Madras and Haldia, both in the coastal areas, are likely to go on stream in 1969 and 1970 respectively. The coastal refineries are refining imported crude. Crude for the Madras and Haldia refineries will also be imported.

4.48. The inland refineries are all operating on the indigenous crude produced by the O.I.L. and the Oil and Natural Gas Commission. Digboi refinery is partly processing the crude produced in their own fields.

4.49. The Fourth Plan envisages another refinery in the North-Western region and its location is yet to be decided.

4.50. From the above details it would be observed that in Bombay alone a refining capacity of 6 to 7 million tonnes is available. It was learnt during evidence that about 50% of the products of the Bombay refineries are being moved offshore to other coastal areas and about three-fourth's of such movement was stated to be in foreign tankers.

4.51. Asked whether there was any proposal of further expansion of the private sector refineries, the representative of the Ministry of Petroleum and Chemicals stated during evidence that the Government did not see any need to expand the refining capacity in the private sector till 1970-71 and that what has to be done after 1971 was still to be studied.

4.52. As per a recent study by the Indian Institute of Petroleum regarding the necessity for expansion of the refinery capacity in India, the demand for petroleum products in 1975 would require a refining capacity of 32 million tonnes per year and in this connection they have suggested the need for respective expansion of each of the public and private sector refineries year-wise upto 1975.

4.53. In view of the above study of the Indian Institute of Petroleum the Government were asked to state the latest position in the matter and the following written reply has been furnished by the Government:

> "A detailed study has been completed by the Institute of Petroleum on the subject. This has looked at the demand and supply situation in different zones of the country upto 1975. According to this study, additional capacity in the Bombay supply area will be necessary from about 1973. This matter

and other questions arising out of the Indian Institute of Petroleum study are receiving Government's consideration. Meanwhile, it is not correct that Government are thinking of permitting expansion of the Bombay refineries owned by foreign oil companies."

4.54. **The Committee observe that the refinery capacity in the country is not evenly distributed among the different zones of the country with the result that the products of the refineries are being sent to far off areas at considerable cost.**

4.55. **The Committee further note that there is heavy concentration of refining capacity in Bombay. They understand that the present trend in other countries is to locate refineries near the consuming centres. With rapid industrialisation in the country, industry will expand from coast to the interior of the country. There is thus a case for locating future refineries in the interior which would give a boost to the industrial development of those areas. The Committee therefore recommend that before selecting the location of a refinery or for allowing expansion, Government should take into account factors like the level of consumption, the need for reducing the disparities in the levels of development between different regions, the strain on the transportation system, avoidance of overcrowding of particular areas etc. They hope that the location of the proposed refinery in the North West region would be decided in accordance with these considerations.**

4.56. **The Committee appreciate Government's decision not to permit expansion of the Bombay refineries. In the opinion of the Committee any further expansion of these refineries is** inter alia **likely to result in:**

(i) **over-concentration in Bombay area,**

(ii) **putting greater strain on the transport system of the country in moving the products,**

(iii) **repatriation of more profits by these refineries in foreign exchange,**

(iv) **import of more crude from their own sources.**

E. Imbalance between production and demand for Petroleum Products

4.57. As already stated the consumption of petroleum products has increased from 2.9 million tonnes in 1950 to 7.8 million tonnes in 1960 and to 13 million tonnes in 1966. This shows there was a rapid increase in consumption of petroleum products not only in the first two Plan periods but in the Third Plan period also. There was however a corresponding growth in the refining capacity in the country which is stated to have been around 12 million tonnes in 1967, when all the eight refineries were in operation.

4.58. From the figures furnished by the Government it is observed that during the Third Plan period, while the country was exporting motor spirit, wax and naphtha, certain products like aviation gasoline, ATF, kerosene, and lubricants were being imported. This shows there was an imbalance between production and demand for petroleum products in the country.

4.59. This imbalance between the production and demand for petroleum products is stated to arise from the fact that the rate of growth in the demand for light distillates *viz.* motor spirit and naphtha is low as compared to the growth in demand for middle distillates *viz.* H.S.D. and kerosene.

4.60. As per a recent study by the I.I.P. the pattern of demand for petroleum products in 1975 is going to be still different requiring major changes in the production pattern. It is expected that the demand for naphtha and to some extent that of diesel oil will increase at a much faster rate than kerosene, fuel oil etc.

4.61. As regards produt pattern of the refineries the Committee have been informed that the product-mix of each of the refineries is determined by the type of crude used, the need for various products and the extent to which products required could be produced for consumption within the economic area assigned to each refinery. The Government is stated to endeavour constantly to review the product pattern adopted and suggest to the refineries where that could be improved.

4.62. During their tour of Eastern Zone in September, 1967 a Study Group of the Committee have been informed that the Digboi refinery is producing an unusually large variety of petroleum products totalling over 100 in number.

4.63. The Committee understand that the operation of a petroleum refinery to some extent is quite flexible and it may be possible for a refinery to operate the refinery in such a way as to meet the requirements of different products as required by consumers. As a matter of fact the consumption pattern of various petroleum products in any country has been changing and the refineries have been able to meet the changing requirements fairly satisfactorily.

4.64. The Committee are unhappy about the imbalance between the production and consumption of certain petroleum products in the country, necessitating imports and exports of some products.

4.65. The Committee realise that the product pattern of a refinery is largely determined by the type of crude used. Even so there is scope for flexibility as is evident by the product pattern of Digboi refinery which uses the same crude as the Gauhati and Barauni refineries but produces a much wider range of products. They recommend that a detailed review of the product pattern of all the refineries in the country may be carried out with a view to assessing the possibility of reducing imbalance in demand and supply through alteration in the product pattern. The Committee would also like Government to undertake continuous planning to meet the changing market requirements indigenously so as to reduce the imbalance to the minimum in the Fourth Plan period and to eliminate its altogether soon thereafter.

4.66. The Committee are also unable to understand why the public sector refineries at Gauhati and Barauni produce fewer items compared to private sector refinery at Digboi although all of them process the same crude. The Committee, therefore, stress the need to diversify the product pattern of the public sector refineries, which would not only improve their product realisation but increase their refinery margin also. The Committee would also like the Government to keep the flexibility of product pattern in view at the time of designing of the refineries in future.

F. Production of Kerosene

4.67. The targets and achievements regarding production of kerosene in the public sector refineries have been as follows:

(in ' 000 tonnes)

Year	Target	Achievement
1962-63	49·6	47·2
1963-64	98·00	94·0
1964-65	108·0	119·7
1965-66	184·6	169·7
1966-67	1115·9	663·1

4.68. It will be seen from the above figures that the performance of the public sector refineries in the production of kerosene, particularly in the year 1966-67 has been much below the expectations. Asked about the reasons therefor, the Committee have been informed during evidence that kerosene is one of the fractions obtained while refining the crude and that production of kerosene was linked with the throughout of crude. It is only marginally that one can increase or decrease its production. The shortfalls in 1966-67 were due to the reduction in the quantity of crude refined as the refineries did not operate at the targetted capacity.

4.69. From subsequent written information furnished by the Government it is understood that another reason for shortfall in kerosene produtcion was a change in the product mix in Gujarat refinery whereby the output of high speed diesel oil was maximised and a certain quantity of aviation turbine fuel was produced to meet the demand for these products and that this had taken place at the expense of kerosene production. The production of kerosene in 1967 was 1.2 million tonnes in the public sector, .8 million tonne in the private sector and .5 million tonne had been imported thus making a total of 2.5 million tonnes. The approximate cost of the import of kerosene is stated to be Rs. 8 crores per year.

4.70. The representative of the Ministry of Petroleum and Chemicals stated during evidence that as per latest estimates of the Government the country is likely to be self-sufficient in kerosene by 1970-71 provided the Haldia refinery is completed in time *i.e.* by 1970. He added that about a 100,000 tonnes will have to be imported in 1970 if this refinery was not completed as per schedule.

4.71. As regards the possibility of completion of the Haldia refinery in time the Managing Director (Refineries Division), I.O.C. stated that I.O.C. had just been entrusted with the work and it was difficult to predict at this stage because of certain factors like soil conditions there, availability of indigenous equipment and arrival of equipment from abroad.

4.72. **The Committee are constrained to observe that the country is still deficient in kerosene production and had to import about 20 per cent of its requirements in 1967 at a cost of about Rs. 8 crores. The Committee note that Government expects the country to be self-sufficient in kerosene by 1970-71 when Haldia refinery is scheduled to be commissioned. The Committee would like to point out that with rapidly rising population, increasing rural incomes and urbanisation, the demand for kerosene as an illuminant and cooking fuel is bound to increase. It is, therefore, essential that effective**

steps are taken for increasing the production of this fuel as early as possible. The Committee strongly urge that Government should take concerted measures for timely completion of the Haldia refinery. Simultaneously it is necessary to maximise the recovery of kerosene distillate fractions from crude oil being processed in other refineries to meet the growing demand of this product. The Committee recommend that Government should investigate the possibilities of achieving this objective by introducing advanced technological processes in the refining of crude oil in the existing refineries.

G. **Production of Liquified Petroleum Gas (L.P.G.)**

4.73. Liquified petroleum gas is gradually replacing kerosene as a domestic fuel. It has a higher calorific value than kerosene, 1 tonne of LPG being equal in thermal replacement value to about 1.07 tonnes of kerosene. It has been stated by Government that by 1970 the Gujarat refinery is expected to increase the production of LPG to about 21,000 tonnes|year. This should replace about 22,500 tonnes per annum of kerosene as domestic fuel.

4.74. Asked why the Cochin refinery was not producing LPG, the Government have stated in a written reply that this was not included in the original yield pattern of the company developed in 1962. A project report for the production of LPG at Cochin refinery has already been prepared and is under examination of the Board of Diretcors in consultation with Indian Oil Corporation and Managing Director, Madras Refineries Limited.

4.75. It is also seen that the Madras and Haldia refineries will also be producing LPG along with other products.

4.76. The Committee understand that shortage of cylinders has so far been a handicap in I.O.C's efforts to reach more and more homes in towns through their LPG named 'INDANE' and that with the availability of additional cylinders in large quantities in the months to come they hope to cater to the needs of a larger number of towns and industrial areas.

4.77. The Committee are happy to note the introduction of INDANE into the market by I.O.C. They hope that with the completion of Madras and Haldia refineries, the production of Liquified Petroleum Gas (L.P.G.) will be adequate to meet the demand for this product to a considerable extent.

4.78. While regretting that LPG was not included in the original product pattern of the Cochin refinery, the Committee are happy

to note that a project report for the production of LPG at this refinery is also under examination by its Board of Directors. They hope that an early decision will be taken in the matter and no time will be lost in starting its production. Government should also examine the feasibility of producing L.P.G. at Gauhati.

4.79. The Committee would like to emphasise that the availability of LPG would minimise the use of kerosene and other fuels which are in short supply in the country. They would urge that Government should give increasing importance to the production of LPG in the refineries and the development of other fuels like town gas which would relieve the pressure on kerosene.

H. Production of Lubricating Oils

4.80. The country's needs of lubricating oils were met in the First and Second Plans almost by imports except for a small production at the Digboi refinery of A.O.C. In the Barauni refinery of Indian Oil Corporation, a provision was made to produce about 45,000 tonnes of lubricating oils per year. From a consumption of 336,781 tonnes in 1962, the consumption of lubricating oils in 1970-71 is expected to increase to 8,00,000 tonnes. A number of new plants are proposed to be set up in the country to take care of this demand so that the country may be self-sufficient in lubricating oils by 1970-71. The demand is expected by the Government to be met from the following sources:

	Tonnes
(i) Indian Oil Corporation Barauni refinery (presently under production)	40,000
(ii) Assam Oil Co., Digboi (presently under production). .	35,000
(iii) Lube India Ltd., Bombay (under construction) .	1,50,000
(iv) Madras refinery (under construction) .	2,00,000
(v) Haldia refinery (already approved)	2,00,000
(vi) Another plant either at Cochin or another site to be chosen (under examination)	1,50,000

4.81. The following figures show the quantities of lubricating oils along with respective costs, imported year-wise during the

Third Plan period:

Year	Quantity	Value
	(in m.t.)	(in lakhs of Rs.)
1961	300,768	1473·80
1962	229,132	1146·35
1963	353,285	1784·96
1964	363,257	1995·96
1965	269,088	1329·67
TOTAL	15,15,530	7730·74

From the above figures it would be observed that between 1961 and 1965 the country had been importing these oils on an average of 3 lakh tons per year costing about Rs. 15 crores per year.

4.82. Asked what was the reason for not planning the production of lubricating oil in the country till almost the end of the Third Plan period especially when it was clear that rapid industrialisation of the country will increase its demand manifolds, the Government furnished the following written reply:

> "The consumption of lubricating oils, during the Second Plan period was about 250,000 tons per annum. The private sector oil companies owing refineries in India and processing imported crude oil did not evinee much interest in establishing facilities for the manufacture of lubricating oils, partly because the cost of the facilities to be provided was not commensurate with the quantum of sales realisations. It was therefore decided in August 1956 to invite offers for assistance in establishing a plant in public sector with a capacity of 100,000 tons per annum. While endeavours were being made to obtain these offers, primarily to undertaking a techno-economic study, the outline of the Third Plan listed this as a category 'D' project, and on this score, because of difficulties in finding foreign exchange money, the preparation of the project reports was not authorised untill May 1961. Thereafter, one such

offer received against this enquiry from ESSO, for a participatory project, was approved by Government in May 1963.

As the result of the study prepared by the working groups consisting of Indian Institute of Petroleum, Ministry of Petroleum and Chemicals, Indian Oil Corporation (Marketing) and taking into consideration previous studies made by companies like Badger of U.S.A. and ENI of Italy and the actual sales figures supplied by the various companies importing lubricating oils, the demand for 1970-71 was estimated at 800,000 tonnes/year. But on the basis of consumption in the last 2 years and assuming that the industrial growth will catch up, it is now estimated that the demand in 1970-71 will be around 540,000 tonnes/year. and lube oil production capacities are being established accordingly. The plants that will go into production by 1971 are lube plant at Bombay, Madras refinery and Haldia refinery with a total capacity of 550,000 tonnes/year. With the capacities available from Digboi and Barauni refineries, this will make the installed production capacity to about 650,000 tonnes/year. In order to meet any possible increase in demand, after 1971, a 150,000 tonnes/year plant is being studied for establishment at Cochin, if otherwise found feasible. The three plants at Bombay Madras and Haldia are at different stages of design, and construction, and according to the present available information, they all will go into production by 1971, meeting the country's essential demand for lube oils at that time."

4.83. It was admitted by the representative of the Ministry of Petroleum and Chemicals during evidence that in the case of Gauhati the first public sector refinery in the country, production of lubricating oils was not thought of. He however added that even if it is now thought of in retrospect, the output would have been very very small because of the capacity of the refinery.

4.84. The Committee regret to note that almost the entire demand for lubricating oils in the country is being met so far through imports and that it would continue to be so to a considerable extent till 1971. They consider it unfortunate that this items, so essential for the wheels of the industry, was listed as a category 'D' project in the outline of the Third Plan with the result that the preparation of the project reports for this item was not authorised till May, 1961.

4.85. Since the setting up of lubricating oil plants in the country has been badly delayed and lubricants continue to be imported at an average cost of more than Rs. 15 crores per year, the Committee cannot too strongly stress upon the Government the necessity for ensuring that all the proposed projects for the production of lubricating oils in the country are completed in time so that valuable foreign exchange, may not be spent on their imports after 1971.

4.86. The Committee would further like the Government to keep the estimates demand for lubricants under constant review and take timely measures to set up additional capacity to meet the increased demand.

4.87. The Committee would also suggest that the feasibility of reducing the number of grades of lubricants to the minimum may be examined as that would help in reducing cost and improving efficiency.

I. Lube India Ltd., Bombay

4.88. The Committee have been informed by the Government that originally when the project for a lube oil plant in Bombay was put up for the approval of the Cabinet in 1963, the total cost of the project was estimated at Rs. 5.89 crores (excluding working capital). When the agreement was concluded on 15-9-1965 between the Government of India and ESSO, the total fixed capital cost of the project was estimated at Rs. 7.16 crores (excluding working capital). This cost was subject to a subsequent detailed techno-economic survey being carried out by ESSO under para 15 of the said Agreement. This was completed and report submitted in October 1965, when on the basis of a preliminary assessment of the increased rate of import duty, the fixed investment cost had increased from Rs. 7.16 crores to Rs. 7.50 crores (excluding working capital).

4.89. The cost of the project is now provisionally estimated at Rs. 14.40 crores (19.2 million dollars), though an increase beyond this figure is not ruled out, since the project is being executed on a reimbursible cost plus fee basis. The break-up of the same, including increase in cost by $4.22 million is given below:

(amount in '000 $ equivalent)

I. Estimated capital cost as included in the Lube Refinery Agreement (Sept. 1965) (Rs. 7·16 crores)	15,000
II. Main variations :	
(*a*) Omissions in estimate at I now included :	
(*i*) Pre-start up interest	1,045
(*ii*) Construction services agreement expenditure	750
(*b*) Changes found necessary on preparation of detailed design : increased expenditure mainly on vacuum pipe-still, phenolfiner and hydro-refiner	400
(*c*) Additional expenditure on account of sharing of facilities with ESSO refinery not considered possible now .	245
(*d*) Increase in expenditure on account of extension of work schedule and completion date (by nine months), partly offset by reduction of provision for customs duty, (the rate being 27·5% as against 35% to 45% taken in the original estimates)	150
(*e*) Increase in rupee expenditure as a result of devaluation (8%)	700
(*f*) Provision of additional units not included in the original estimate :	
(*i*) Transformer oil base stock plant . .	450
(*ii*) Acid treating unit for colour stability of the products	400
(*g*) Net effect of other minor increases and decreases (including world market price variations)	80
TOTAL II :	4,220
III. Revised Estimates (I) plus (II) . . . . . . or Dollars 19·2 million	19,220

4.90. Asked if this was the last revision in the costs the representative of the Ministry of Petroleum and Chemicals stated during evidence that it was difficult for him to say what the ultimate cost would be but added that the Government were doing their best to control the costs as much as possible. He could not guarantee that the costs will remain at Rs. 14 crores and odd. Asked if the revision had the approval of the Cabinet he stated that the revision had the approval of the Ministers of Finance and Petroleum and Chemicals. It was also stated that certain costs were estimated for certain equipments but at the time of actual bidding the costs were found to be higher. He admitted that it might be due to an error in estimating. Another reason for increase in cost estimates was stated to be the interest charges on construction over a longer period due to delay. He admitted that there was no provision in the agreement for fixing any liability for delay.

4.91. The work at site is stated to have started and the expected date of completion of the project is October, 1969.

4.92. The Committee are deeply concerned about the upward revisions in the cost estimates of the lube project which have gone up from Rs. 5.89 crores to Rs. 14.40 crores. What is more disturbing is that Government are unable to guarantee that there will not be any further upward revision of the cost estimates. The Committee regret that this matter involving about 250 per cent increase in the cost estimates of the project had not even been brought before the Cabinet for their approval.

4.93. The Committee note that a number of items were omitted to be included in the original estimates. They recommend that a thorough enquiry experts should be conducted into the reasons for these omissions so as to fix responsibility therefor. The Committee further recommend that such steep rises in the estimates should be got approved by the Cabinet.

4.94. The Committee are also unhappy to note that while more than a million dollars are to be paid by way of interest charges for the pre-start up period, the agreement does not provide for any liability for the delay on the part of the parties concerned. In this connection they note that there has been further increase in expenditure on account of the extension of work schedule and date of completion (by nine months).

4.95. The Committee cannot but conclude that due care in drawing up the agreement to safeguard the interests of the country which could have been taken, was not taken.

J. Reclamation of used lubricating oils

4.96. The objective of any reclamation process is to restore the contaminated|used oil sufficiently to perform its original functions satisfactorily. The ideal process, known as refining, makes use of a combination of equipment in an attempt to restore lubricating oils to a new conditions. The other extreme is the process, known as oil reconditioning, which is followed by industrial units when any considerable volume of oils is involved and positive circulation to the machine parts is required. The reclamation of lubricating oil is, therefore, a common practice, the extent of which depends on the economics of the process employed.

4.97. The Committee have been informed that the subject of reclamation of used lubricating oils was referred by the Government to the Indian Institute of Petroleum, Dehradun for study and recommendation. In I.I.P., laboratory studies and pilot plants study for reclaiming motor oils have been carried out successfully. A pilot plant of 200 tonnes per annum capacity has been designed, fabricated indigenously and is in operation since 1964. Research designs and standards organisations, Ministry of Railways have also developed methods for reclamation of used oil. Similarly Defence Research Laboratory (Materials) at Kanpur, have designed and installed a pilot plant for reclaiming used lubricating oil. Its capacity of refining is only 45 kl. per year. It is still in the experimental stage and the actual refining process has not been started. The process has been forwarded to National Research Development Corporation, New Delhi, who are negotiating for licensing the process to suitable firms.

4.98. Two private parties have been permitted to set up reclamation units with the know-how developed by I.I.P. They are still in correspondence with I.I.P. Several private entrepreneurs have approached I.I.P., Defence Research Laboratory, Kanpur and also Railways either for technical assistance or for setting up oil reclamation plants for reclaiming the oil available with Railways and Defence.

4.99. According to the Government there are some practical difficulties in exploitation of re-refining process of used oils on a wide scale. To establish an economical re-refining unit a large quantity of feedstock of used oils has to be collected on a regular basis. This large quantity of used oils would have to be collected from numerous users involving a large area. The collection of a large quantity would not be economical due to double freight charges. Another difficulty is that various grades of different kinds of lubricating oils are being indiscriminately mixed together. Unless the used oils of different specifications are kept separately, no guarantee can be given in respect of quality of the re-refined products.

4.100. The process of deconditioning of oils which is rather a simple process like filteration, etc. is stated to be already followed as a normal practice by the users themselves. Government have also stated that the I.I.P. is making every effort to develop and popularise the process of re-refining of used oil as far as possible.

4.101. The Committee are happy to note that the Indian Institute of Petroleum, Research Designs and Standards Organisation, Ministry of Railways and Defence Research Laboratory (Materials), Kanpur have successfully evolved methods for reclamation of used lubricating oils. Since lubricating oils are a deficit item in the country being imported at an average cost of Rs. 15 crores per year, the Committee strongly urge that the Government should expedite commercial exploitation of the process evolved by the above research organisations so that at least a part of the demand for lubricating oils is met from the used lubricating oils reclaimed in the country. While the Committee agree that cost of collection of used lubricating oils from over a large area tends to make the process uneconomical, they feel that it would not be uneconomical to establish such plants near the major industrial complexes in the country. Apart from saving in freight charges such a step will lead to ready availability of the lubricants so essential for the industrial machinery.

V

PRICING OF CRUDE AND PETROLEUM PRODUCTS

A. Pricing of Crude

(i) *Imported Crude*

5.1. As already stated, out of the 8 refineries operating in the country, 4 refineries viz., Burmah Shell, ESSO, Caltex and Cochin refinery are based on imported crude. The other 4 viz., Gauhati, Barauni, Koyali and Digboi process indigenous crude only. The price of crude oil is a major element in the products costs. The price of the indigenous crude is also linked to the price of imported crudes and hence the price of the imported crude is very important.

5.2. It has been stated that in the agreements made by the oil companies with the Government of India in the years 1951 and 1953, under which the three coastal refineries have been established by Burmah Shell, ESSO and Caltex, the oil companies have been given the freedom to make arrangements for importing crude oil from source of supply of their own selection, subject to the obligation to use, under certain conditions, crude oil produced in India.

5.3. These Refinery Agreements contain the assurance that for importation of crude oil, foreign exchange will be provided as required. In addition, the Refinery Agreements also contain further assurance to the effect that no import duty will be imposed on crude oil imported for the refinery unless and until this is required for the purpose of protection to indigenous crude oil. Assurance is also given for regulation of the inward and outward wharfage rates on crude oil and products. Extracts of the relevant clauses of the Refinery Agreements of the three companies regarding the import of crude oil are given at Appendix II.

5.4. It will be seen that while in the Agreements for ESSO and Caltex refineries, it is mentioned that the purchase will be made at world market prices prevaling at the time and place of shipment, there is no similar provision in the Burmah Shell agreement. In the case of Cochin refinery in the public sector, the agreement with the Phillips Petroleum Company provides that for a period of 15 years Phillips will; as Agent of the Refinery Company, make arrangements for the purchase of imported crude oil on the best terms possible.

5.5. The price of imported crude is not fixed by Government. Crude oil is imported by those companies on the basis of posted prices of crude oils in Middle East. Discounts on purchases for India was allowed for the first time in June 1960. Since then some further reduction in the C & F cost of imported crude are stated to have been secured. The following statements show the break up of the landed costs of oil imported by the coastal refineries during September, 1967:

	Burmah Shell Refineries (Bombay)	September, 1967	Esso Standard Refining Co. of India Ltd. Bombay Sept. 1967.
	Rs./per tonne	Rs./per tonne	Rs./per tonne
1. Type of Crude	Iranian Light	Kuwait Ex-Mina-al-Ahmadi	Arabian Mix
2. Gravity of Crude	33·5—34·9	31—31·9	API 33·2
3. Port of Shipment	Kharg Island	Mina-al-Ahmadi	Ras Tanura
4. Posted FOB per US barrels in dollars	$ 1.7800	$ 1·59	$1·40
5. Conversion factors barrels to M. Ton	7·3635	7·2489	7·3337
6. Conversion factors dollars to Rs.	7·5801	7·5802	0·1320
7. Posted FOB per M.T.	Rs. 99·353	Rs. 87·367	Rs. 77·78 (National) Discounted FOB)
8. Freight to Bombay per M.Ton	Rs. 17·633	Rs. 18·010	Rs. 16·97
9. Insurance—Rs./M.T.	Rs. 0·098	Rs. 0·093	Rs. 0·10
10. Ocean Loss/(Gain) per M. Ton	Rs. 0·156	Rs. (0·015)	Rs. (0·16)

	Burmah Shell Refineries (Bombay)	September, 1967	Esso Standard Refining Co. of India Ltd. Bombay Sept. 1967
	Rs./per tonne	Rs./per tonne	Rs./per tonne
11. CIF Bombay per M. Ton (7+8+9+10) .	Rs. 117·240	Rs. 105·455	Rs. 94·69
12. Discount per M. Ton .	Rs. 21·238	Rs. 13·735	..
13. Net CIF Bombay per M. Ton .	Rs. 96·002	Rs. 91·720	Rs. 94·69
14. Wharfage and landing charges . .	Rs. 7·150	Rs. 7·150	Rs. 7·04
15. Octroi . .	Rs. 2·900	Rs. 2·900	Rs. 2·90
16. Landed Cost	Rs. 106·052	Rs. 101·770	Rs. 104·63

	Caltex Oil Refining (India) Ltd.	September, 1967	Cochin Refineries Ltd., Cochin. September, 1967
	Rs./per tonne	Rs./per tonne	Rs./per tonne
1. Type of Crude	Aghajari	Khursaniya	Iranina Light
2. Gravity of Crude	33·5—34·7	29—29·9	API 34·0—34·2
3. Port of Shipment	Rash Tanura	Rash Tanura	Kharg Island
4. Posted FOB per US barrel in dollars	$ 1·79	$ 1·55	$ 1·40
5. Conversion factors barrel to M. tons.	7·3692	7·1901	7·374
6. Conversion factors dollars to Rs.	7·5793	7·5835	7·50
7. Posted FOB per M.T.	Rs. 99·956	Rs .84·516	Rs .77·43 (National (Discount FOB)
8. Freight per M.Ton	Rs. 19·192 (Freight to Vizag)	Rs. 30·376 (Freight to Vizag)	Rs. 11·12 (Freight to Cochin)
9. Insurance—Rs./M.T.	Rs. 0·088	Rs. 0·085	Rs. 0·09
10. Ocean Loss/(Gain) per M. Ton	Rs. 0·388	Rs. 1·905	Rs. 0·83

	Caltex Oil Refining (India) Ltd.	September, 1967	Cochin Refiners Ltd., Cochin. September, 1967
	Rs. /per tone	Rs./per tone	Rs./per tone
11. C.I.F. Bombay per M. Ton (7+8+9+10) . . .	Rs. 119·624	Rs. 116·882 (CIF Cochin.)	Rs. 89·47
12. Discount per M. Ton	Rs. 21·224	Rs. 11·450	..
13. Net CIF per M. Ton . .	Rs. 98·400	Rs. 105·432 (Net CIF Cochin)	Rs. 89·47
14. Wharfage and landing charges .	Rs. 4·270	Rs. 4·270	Rs. 4·10
15. Octroi		..	
16. Landed Cost	Rs. 102·670	Rs. 109·702	Rs. 93·57

It will be seen that the landed cost of imported crude per tonne varies from Rs. 93.57 in the case of Cochin refinery to Rs. 109.702 in the case of Caltex refinery.

5.6. The difference in the net C.I.F. prices of various crudes imported by the coastal refineries are stated to be due to the following reasons:

(i) F.O.B. posted prices are quoted in U.S. dollars and cents per barrel and are variable for different crudes of varying A.P.I. gravities;

(ii) When barrels are converted to metric tonnes, there is bound to be difference in the conversion factor used for each type of crude on the basis of A.P.I. Gravity of each crude;

(iii) When conversion is made from dollars to Indian currency, the Exchange Bank rate prevailing on the date on which a particular transaction is made is taken into account and results in some difference.

(iv) Freight charges are variable according to the type of tanker and distance covered.

5.7. It was stated during evidence that the cost of crude to Cochin refinery was cheaper on account of the fact that they had made a tanker contract for transportation of crude at a more favourable rate and that there was a difference in the wharfage charges also as between Bombay and Cochin. Asked why the other companies should be allowed to make their own tanker arrangements for transportation of crude when such charges were higher, the Secretary of the Ministry of Petroleum and Chemicals stated that an additional Indian fleet was in the process of being developed and the Government would be pressing the oil companies to use the Indian tankers for all their traffic. The matter was stated to be under discussion with the Transport Ministry. He also stated during evidence:—

"The prices vary for different crudes because of difference in qualities; they are not of the same type. Each has a recognised posted price. Each is available to India at a certain discount. That is the result of our best efforts to reduce prices from time to time. In 1960 we were getting no discount. Aghajari and the Light Iranian crude were being sold at a dollar and 78 cents in 1960 and to-day at a dollar and 40 cents. Over this period we have been able to reduce these prices. Import parity works on the principle of what is being paid today, what is being paid for comparable qualities. We are all the time trying to reduce the cost of imported crude oil. That is one of our principal endeavours."

5.8. In this connection it may be stated that the Working Group on Oil Prices suggested that imports of crude oil should be made at least at the following discounts off f.o.b. posted rates:

	Cents per barrel		
	Effective date	Current rate of discount	Minimum rate recommended by the Working Group
Light Crude e.g.	1-7-65	30	40
Light Iranian Aramico	1-2-65	23	
Lighter Crudes e.g. Qatar	1/62	21	45
Medium crudes, e.g. Kuwait, Khursaniyah	6/60	3	30
Heavy crudes, e.g. Safeniya	6/60	16	21

5.9. The current rates of discount on imported crude oil (effective 1st January, 1966) were however stated to be as follows:—

Type of crude imported	Current rates of discount
	(cents per barrel)
Light Crudes e.g. Light Iranian	38
Medium Crudes:	
Kuwait	25
Khursania	21

5.10. Regarding the discounts recommended by the Working Group on Oil Prices, the representative of the Ministry stated that they did not know if the Working Group had based those figures on any definite evidence.

5.11. The Working Group on Oil Prices also made the following observations in their report submitted in 1965:

> "The prices of different crudes are "posted" or published by the international oil companies at the oil ports, but a "temporary" discount or "indulgence" (as one oil company would prefer to call it) is allowed under the counter and the net f.o.b. is thus determined. The discount is not published. It is difficult for a outsider to judge whether the prices paid in particular cases are fully competitive in relation to the market conditions. Crude oil has been a buyer's market for a long time and 1964 has done nothing to reduce the pressure of supplies. (Petroleum Press Service December 1964). But the posted prices have not been changed since October, 1960. One reason for this may be that the Government of the producing countries do not like any change to be made in the posted prices as their share of the oil profits is calculated on such prices. Discounts on the posted prices have steadily increased with the result that the published prices have tended to become unrealistic."

> "Unlike countries of Western Europe and some of the countries of Asia, the foreign owned refineries in India are free from internal competition. There are no independent refineries in India to compete. The public sector refineries with their total output in 1964 of 0·90 million tonnes only have not yet attained adequate stability of operation and also suffer from other handicaps and offer no real competition. Indigenous crude cannot replace the crude imported by them except to a vary limited extent. In such a position it is not surprising that the oil companies have had little urge to obtain better discounts on crude supplies in a falling market. The discounts hitherto obtained have gradually resulted from forces other than commercial competition, such as pressure exerted by Government from time to time".

5.12. The Committee are concerned to note that though the private sector refineries had started processing of imported crude from 1954 onwards, no discounts on account of purchase of imported crude were allowed by them till June, 1960. According to the

agreements with these refineries the purchases of the crude are to be made by them at world market prices for which foreign exchange is made available by Government. It was, therefore, the duty of the Ministry to ensure that the prices charged by these refineries for the import of crude were the real market prices. As the giving of discounts is a normal practice in the oil market, it is unfortunate that the Ministry did not keep itself posted with the latest price trends in the world oil market and did not press the refineries to allow the available discounts resulting in avoidable outgo of scarce foreign exchange. The Committee are unable to understand why even now, the rates of discount allowed by the coastal refineries are less than the minimum discounts recommended by the Working Group on Oil Prices. It appears that Government are still unaware of the latest price trends in world oil markets and rates of discounts available. As the number of refineries based on imported crude is increasing and there are no immediate prospects of meeting the requirements of the refineries from indigenous crude, the Committee recommend that Government should take immediate measures to collect uptodate information on the trend of oil prices in the world market including the discounts available from time to time and insist on the oil refineries to allow maximum discounts so as to reduce prices. In case the refineries are unwilling to do so, Government should not hesitate to make arrangements to procure their requirements of crude from the cheapest available source. Since the Indian Oil Corporation has already gained experience in importing petroleum products, it should not be difficult for them to arrange for the import of crude for the coastal refineries and to keep themselves posted with the latest price trends in world market. Considering the heavy imports of crude oil which are estimated at about Rs. 110 crores per annum by 1970-71, it is necessary to secure the maximum price advantage in the import of crude oil as the price reduction of a few cents per barrel would result in saving considerable foreign exchange.

5.13. The Committee further note that one of the reasons for the cheapness of the crude imported by the Cochin refinery is that they have made a tanker contract for transportation of crude at more favourable rates. There is a difference of over Rs. 5 per ton in the freight paid by Cochin refineries which is Rs. 11.12 compared to Rs. 17.6 by Burmah Shell and about Rs. 17 per ton by the ESSO refineries. Calculating on the average saving of Rs. 5 per ton on freight, the annual saving on the import of over 6 million tonnes of crude by the Bombay refineries would amount to about Rs. 3

crores in foreign exchange. The Committee see no reason why the Bombay refineries cannot be asked to make similar arrangements for the transport of their crude as have been made by the Cochin refineries.

5.14. The Committee cannot over-emphasise the need of bringing down the prices of the imported crude as these have a very important effect on the price of petroleum products. The Committee therefore recommend that immediate action should be taken by Government to secure the maximum discounts on imported crude and cheapest tanker freight rates.

(ii) *Pricing of Indigenous Crude*

5.15. The price of indigenous crude is based on parity with the equivalent quality Middle-East crude. Under the pricing arrangement enforced from 1st February 1966, indigenous crude was priced at the import parity taking into account the full posted prices (without discounts) of analogus crude in the Middle East. This was done in order to obtain a fair price for indigenous crude. From 6th June, 1966 the Government however reverted to the earlier method of parity with discounted prices because devaluation had the effect of increasing the parity price in rupees substantially. A model calculation of Ankelshwar crude furnished by the Government is reproduced below:

Model calculation	Price of Ankleshwar Crude—API 49 price as on 1-4-1967 Iranian Light Ex-Bandar Mashur
Posted F.O.B. 300—34·9° API per barrel (34·9726 IG)	$1·78
Discount per barrel	38 q
Escalation per barrel (13×2)	26q
Conversion Factors . .	0·22009IG=1Litre 1249 Litre=1 MT *7·929 Brls=1 MT
Exchange rate	1$=Rs. 7·50 1£=Rs. 21·00

— *Conversion factor applicable for crude of 47° API gravity.

Model calculation	Price of Ankleshwar crude-API49 Price as on 1-4-1967
	Iranian Light Ex Bandar Mashur
Posted F.O.B.	Rs. 105·8522
Discount	Rs. (22·5977)
	83·2545
Escalation	Rs. 15·4612
	Rs.98·7157
Ocean freight IIS. 9. 6. D	Rs. 12·3900
(ex-Bandar Mashar)	A. Rs. 111·1057
Insurance (0·1018% on A)	0·1131
	B. 111·2188
Ocean Loss (0·60% on B)	0·6673
	111·8861
Import Wharfage	7·5190
Other receiving charges (as per Burmah-Shell information)	0·0563
LANDED COST	119·4614

5.16. It will be noted from the above calculations that while pricing crude at the imported parity with discount various elements like ocean freight, insurance, ocean loss, import charges etc. have been added. Asked if the inclusion of these elements did not boost the price of indigenous crude the Secretary of the Ministry stated during evidence:

> "We do wish the indigenous crude to have a proper value. I think there are two factors operating here. We have a lot of crude imported. This is priced on the import parity basis. So long as this situation has to continue, that is to say, the crude has to be imported in a substantial way, the prices have to be fixed on he basis of import parity. I think it is only right and proper that indigenous crude should also be based on parity with the imported crude We have to see the economics of production here and in foreign countries. I think there is every justification for pricing indigenous crude higher because the factors of production cost here, the circumstances in which we pro-

duce the crude, the small per well out put per day point out to the necessity of higher price. As a matter of fact, in February, 1966 when prices abroad were coming down, the Government even took resort to the levying of a protective duty so as to give indigenous crude a reasonable measure of protection against imports at a time of falling prices. This protective duty was taken off after devaluation which provided a certain measure of protection. In our judgment the establishment of the parity principle is essential so long as we continue to have imported crude."

5.17. Asked why the prices of indigenous crude should not be fixed on parity with the import price with discount and without inclusion of all the other elements he stated,

"For example, Ankelshwar crude is delivered at Koyali refinery at the delivered price, including the element of transportation, including sales tax and such other levies which are locally payable. And our endeavour is that Koyali refinery should get this at the parity price. And thus the Oil and Natural Gas Commission pays the transportation cost from Ankleshwar to Koyali. It pays the sales tax. On imported crude there is no sales tax. This is the basis."

5.18. Regarding the cost of production of indigenous crude by ONGC and Oil India—the two organisations engaged in the exploration and production of crude in the country, the Committee have been informed that the provisional cost of crude oil up to the year 1983 produced by Oil India Limited consisting of seven elements viz.

1. Drilling Expenditure;
2. Production Expenditure;
3. Amortisation of exploration expenditure and development drilling expenditure incurred in earlier years;
4. Interest;
5. Miscellaneous expenses;
6. Depreciation|Development Rebate;
7. Royalty.

based on certain assumptions *e.g.* secondary recovery schemes| in-filler drilling etc. comes to about Rs. 40 per tonne.

5.19. The cost of Ankelshwar crude oil comprising 9 elements viz:

1. Operational cost of production;
2. Royalty;
3. Depletion of the field;
4. Field exploration expenses;
5. Amortisation of the expenditure on exploration in other areas,
6. Cost of transportation to the point of delivery;
7. Sales Tax;
8. Handling charges; and
9. Octroi duty.

came to Rs. 57.15 per tonne in 1967.

5.20. Since the cost of production of crude by Oil India Ltd. i.e. Rs. 40 per tonne was worked out on a discounted basis over a period of 15 years the Government were asked to furnish the annual production cost of Oil India Ltd. as has been done by O.N.G.C. The figures indicating the annual cost per ton by Oil India since 1959 as furnished by the Government are given below:

Year	Cost per tonne
	Rs.
1959	64·62
1960	67·72
1961	157·64
1962	99·43
1963	80·91
1964	59·64
1965	49·78
1966	44·48

5.21. It has been stated by Government that the costs of production of Oil and Natural Gas Commission compare very favourably with that of Oil India Ltd.

5.22. Explaining the costs structure of crude produced by Oil India Ltd. and Oil & Natural Gas Commission, the Secretary of the Ministry state during evidence:

> "The O.N.G.C. have been followed the practice of coming up with proforma cost of production for each year. Oil India, on the other hand, have been trying to work out the cost per ton of oil on a discounted basis over a 15 year period. Oil India's costs have been generally worked out on the basis of the total life of the oil field. On that basis, for example, for 15 year period in Naharkatiya and Moran in these years the Oil India have come up with a figure of about Rs. 40/- per tonne as cost of production. So, the comparisons will not be very helpful. In one case it is an average cost of production over the life of the field—say 15 year period, in the other case these are costs for every year."

5.23. It will be noticed from paras 5.18 and 5.19 that in working out the cost of crude in the case of Oil India Ltd. only seven elements of cost have been taken into account, while in working out the cost of Ankleshwar crude, nine elements have been taken into account. Asked what were the difficulties in working out the cost in both these cases on the basis of similar cost elements so as to compare the performance and efficiency of each organisation, the Government have stated that "The question of having a uniform procedure for collection, analysis and compilation of costs for both Oil India and Oil and Natural Gas Commission is being examined. As the accounting procedure of these two organisations are slightly different, a strict comparison is not possible at present."

5.24. The Committee agree that in pricing the indigenous crude a measure of protection is desirable. At the same time, it is necessary that the O.N.G.C. and Oil India should work efficiently and economically so as to keep down the cost of production of indigenous crude to the maximum extent possible. The Committee note that at present the indigenous crude is priced at import parity which includes ocean freight, insurance, ocean losses, wharfage and landing charges. Besides, devaluation has resulted in further increasing the price of imported crude by over 58 per cent. It is therefore a matter for consideration what should be the extent of protection which should be given to the indigenous crude, with particular reference to the conditions prevailing for the exploration and exploitation of oil in the country and the need for efficiency and economy in the working of the O.N.G.C. and Oil India. The Committee therefore recommend that the Government should re-examine the question of linking the price of indigenous crudes with

that of the equivalent quality of imported crude. For this purpose a committee consisting of experts in petroleum technology, costing and financial matters should be appointed to review the whole basis of pricing of indigenous crude—i.e. whether it should be import parity or cost plus basis or any other suitable basis. In particular, the question of inclusion of cost elements like ocean freight, ocean loss, insurance, wharfage, etc. which are merely notional for the purpose of computing import parity price, should be fully examined.

5.25. The Committee are surprised that no uniform procedure is followed by the O.N.G.C. and Oil India in calculating their production costs. They regret that Government who are also 50 per cent partner in the Oil India Ltd. had not looked to the aspect of laying down a common costing pattern for both the organisations which would have facilitated comparison of their respective performances. The Committee however note that the matter is now under examination of the Government. The Committee recommend that a uniform procedure for collection, analysis and compilation of costs by both these organisations should be laid down without further delay.

B. Pricing of Petroleum Products

(i) *General Background*

5.26. The oil companies were, in the past, fixing the prices of petroleum products after consultation with the Government. With effect from 1st April, 1960, the basic selling prices of all the major petroleum products, except Bitumen and Lubricants, marketed in India were governed by an agreement known as Valued Stock Account (V.S.A.) procedure, entered into by Burmah Shell with the Government. According to the V.S.A. formula, the prices for all bulk refined petroleum products, were determined by adding (i) f.o.b. Ras Tanura (formerly U.S. Gulf) price on date of loading; (ii) ocean freight from Ras Tanura to Indian port, or ports, of despatch irrespective of actual source of supply; (iii) Marine and War Risk Insurance on insurable value; (iv) Ocean loss; (v) Remuneration at 10 per cent on c.i.f. plus charges post c.i.f. (excluding duty, rent and hire on facilities, rail freight and sales tax); (vi) import duty; (vii) interest and Del Credere on duty at 2½ per cent and (viii) charges from c.i.f. to ex-installation/local pump. The V.S.A. Agreement was subject to termination at a month's notice on either side and related to Government purchases only; but Burmah Shell charged the other consumers the same price as applicable under the said Agreement (except certain extra concessions to Government on bulk purchases). The other oil companies had not such formal agreement with Government but continued to charge the same prices as Burmah Shell.

5.27. The V.S.A. Agreement did not provide for audit by Government of the V.S.A. The Government were unable to judge the propriety or otherwise of the quantum of the various post c.i.f. charges included in V.S.A. on account of the absence of material for this purpose.

5.28. In August, 1957, the Government decided that the then existing pricing procedure, including the V.S.A. Agreement, should be revised and replaced by a new Agreement. It was also decided that the broad basis for pricing should be actual (and not assumed) cost plus reasonable profit. Negotiations were actually pursued with Burmah Shell (which was the price leader for petroleum products as well as the contracting party under V.S.A. Agreement) and also with the other oil companies. In May, 1958, after protracted discussions, the Valued Stock Account Procedure, which governed the basic selling prices of principal petroleum products, was terminated by mutual consent of parties. The *ad hoc* reductions in prices were mopped up by Government through the imposition of additional (non-recoverable) excise and customs duties payable by the companies with effect from 20th May, 1958. The selling prices chargeable to the consumers remained unchanged.

5.29. The Chief Cost Accounts Officer of the Government of India was deputed to conduct the necessary examination and he made his detailed proposals on the new price formula based on the principle of import parity in terms of assurances in the Refinery Agreements concluded with Burmah Shell, Esso and Caltex from 1951 to 1953. He submitted his report on 28-3-1959 regarding bulk refined products only as no details could be had from the oil companies regarding lubricants, greases and specialities. The oil companies did not agree to the price reductions recommended in the report but after protracted negotiations agreed in October, 1959 to an *ad hoc* agreement which provided for further reductions, which were again mopped up by levy of additional (non-recoverable) duties. This arrangement covered the period 1-4-1959 to 30-9-1961.

5.30. In the meantime, Government had set up on 2-8-1960, the Oil Price Enquiry Committee to examine the principles and elements according to which the selling prices of various petroleum products should be determined in the future. In determining the basic ceiling selling prices, this Committee provided for 12 per cent return on capital employed comprising net fixed assets plus current assets minus current liabilities. This Committee also recommended determination of prices on the principle of 'import parity' with certain discounts on f.o.b. cost of products in Abadan, on the basis of the information available to it. This Committee also recommended for the first time 'block control' on marketing charges and profit by fixing ceiling limits for all products classified as lubricant greases and specialities. The oil companies were permitted to frame the prices of the individual products coming under these groups in such a manner that during a financial period, the recovery towards marketing charges and profit margin per unit quantity for each of these groups did not exceed ceilings laid down. The companies were permitted to recover cost of marketing charges and the packaging and filling-in charges on actual rates.

5.31. The recommendations of this Committee were applied from 1.10.1961 and remained in force upto 31.1.1966.

5.32. In the meantime, Government had set up on 12.5.1964, the Working Group on Oil Prices which submitted its report in August, 1965. It has been implemented from 1.2.1966 with the modifications set out in the Government of India Resolution No. 101 (26)|65-PPD of 1st February, 1966 (Appendix III) which provides for the following variations from the report of the Working Group:

(a) A protective import duty of 20 per cent *ad valorem* was imposed on crude oil.

(b) The price of indigenous crude was increased to the extent of the discounts available to the refineries on imported crudes of equivalent quality.

(c) Ex-refienry prices of bulk refined products have been fixed at higher levels on the basis of import parity starting with full f.o.b.'s posting (i.e. without discounts as in the past since 1961).

The decision at (c) was taken to compensate to the extent necessary for the effect of the decisions at (a) and (b) on the economics of the refineries. The protective import duty on crude was abolished from the date of devaluation i.e. 6th June, 1966.

5.33. Consequent on devaluation, c.i.f. cost of imported crude and also of imported chemicals and equipment etc. from which petroleum products are processed increased by 58.81 per cent. There was also corresponding increase in the price of indigenous crude which is currently determined on 'import parity'. The ex-refinery price of the products also increased by 58.81 per cent. But certain additional non-recoverable duties were levied. In order to keep the consumer prices of products unaffected suitable adjustments in the rates of basic duties were also made. As a result of this arrangement, the increase in the cost of crude to the refineries has been reimbursed to the companies by the Central Government by appropriate adjustment of the duty rates and the selling prices of the products to the consumers have not been enhanced.

5.34. Thus, there has been no rise in the basic ceiling selling prices of these products consequent on devaluation except to the extent of variation in port dues which has recently taken place in some cases.

5.35. In addition to the above mentioned major products, lubricating oils and greases (which are also petroleum based) are in common use. The products are either imported in the finished state or processed indigenously from imported base oils. To enable the oil companies to recover the additional cost of imported material after devaluation, increase in the selling prices of these products has been allowed from 1-7-1965 by 18 paise/litre for high grade lubricants and greases and 11 paise/litre for other lubricants and greases. This increase in the selling prices of these products is intended to reimburse the companies the increase in the costs of imported material. Necessary steps have been taken by the oil companies to advertise their selling prices (including the authorised increases) in the newspapers, to post them at the retail outlets for general information and to ensure that the selling prices throughout the country by their agents/dealers are not increased by more than the aforesaid amount. The State Governments and Union Territory administrations have also been advised to watch that selling prices are not increased beyond the authorised limits.

5.36. However, the following increases in the selling prices of the following special petroleum products used by industrial consumers have been allowed w.e.f. 3-3-1967:

(i) Jute Batching oil, Mineral Turpentine, Solvents, S.B.P. Spirits, Hexanes.	Rs. 35:00 per selling unit (KL/MT)
(ii) Refinery Gas	Rs. 20.00 per MT.
(iii) Naphtha	Rs. 20:00 per MT.

5.37. The selling prices of these products had remained unaltered since devaluation despite pressure from the companies and the above increases have been allowed on a temporary basis, subject to review.

5.38. Further, the rates of additional (non-recoverable duties have been reduced from 27-3-1967, with a view to reimbursing the oil companies a part of the loss resulting from the lower marketing charges and profit, allowed by the Working Group on Oil Prices which assumed a higher volume of trade for these companies which eventually did not materialise.

5.39. Selling prices of bulk refined petroleum products (except kerosene, ATF whose prices are statutorily controlled) and Bitumen are only informally controlled by agreement with the oil companies. This arrangement is stated to have worked satisfactorily and there has been no rise in the selling prices of these products of a speculative nature except for occasional reports of increases in prices at isolated points due to local scarcities. In respect of kerosene, however, statutory control has been applied on the selling prices at all stages in terms of the Essential Commodities Act 1965 (10 of 1955).

(ii) *Basis for pricing of Petroleum Products*

5.40 The prices of the major petroleum products imported from the Middle East have been taken as the basis for fixing prices for comparable indigenous petroleum products. The refining companies have accordingly been permitted to establish the prices of their various products ex-their refineries, from time to time at any level not higher than the landed costs of comparable products on import from the Middle East market. Thus import parity is the basis for pricing the products.

5.41. The F.O.B. prices of the various petroleum products are posted by the major oil companies of different ports of loading in the Middle East. These product postings are the starting point in the build-up of import parity prices in India. The import parity prices of the products are thus determined by adding together, the lowest F.O.B. quotations ex-Abadan (as on 18-5-1965) and now ex-Bandar Mah-Shahr (as on 25-7-1967), the ocean freight and Marine Insurance, with an allowance for ocean loss, and then by adding to the C.I.F. price, port and other landing charges and the import duty. The import parity prices differ from port to port, depending on the freight and the lading charges. The installation, administration and distribution charges and the profits—elements of marketing—are then added to the landed cost to get the basic ceiling selling prices of various petroleum products ex-companies' storage points at various ports.

5.42. For determining the prices at up-country points, rail freight by the most economical route sales tax and other local levies applicable at the place of sale, if any, are allowed to be added to the basic ceiling selling prices.

5.43. Under the pricing arrangement implemented from 1-2-1966, the landed cost of bulk refined petroleum products for the purposes of internal pricing has been determined with F.O.B. at Abadan and ocean freight from Abadan to Indian ports (with AFRA variation) as on 18-5-1965. The notional landed cost of main petroleum products as on 1-7-1967 with C & F as on 18-5-1965 adopted for internal pricing (on pre-devaluation as well as post-devaluation rates) is given in statements Nos. 1 to 14 in Appendix IV. With the stoppage of product price postings at Abadan and introduction of postings at Bandar Mahshar, the prices have now been built up, with effect from 11-9-1967, on the F.O.B., at Bandar Mahshar, which marginally reduces the C & F price at Indian ports. It will be seen that while determining the import parity price of petroleum products apart from the posted prices, ocean freight, marine insurance, port and other charges, import duty has also been added. Asked what was the amount of the import duty on petroleum and petroleum products the Government have stated that import duty on petroleum products are leviable at the counter railing rate of excise duty.

5.44. According to them the inclusion of import duty on products does not result in any uncalled for increase in the ex-refinery prices as whatever is recovered by the refinery from the marketing company towards basic duty is also paid by the refinery to the revenue authorities, except for the reduction in basic duty carried out in the wake of devaluation which is retained by the refinery towards the increase in the ex-refinery price due to it on the notional principle of import parity, as a result of devaluation. However, these amounts do not accrue fully to the refinery as additional (non-recoverable) duty is also payable by the refinery as a result of the devaluation exercise.

5.45. Asked whether devaluation has not given the refineries an unintended benefit of 58 per cent, Government have stated in a written reply that:

"The point has been kept in view in the adjustments of the rates of basic (recoverable) and additional (non-recoverable) duties carried out as a result of devaluation. In doing so, (i) the basic ceiling selling prices to the consumers were not altered but reduction in the rates of basic (recoverable) duties was made to allow for increase in ex-refinery prices as a result of devalution, on a notional basis. Simultaneously, (ii) the actual increase in cost of refinery operation on account of increased cost of imported and/or indigenous crude, imported chemicals, equipment etc. was calculated and the incidence of increase determined per unit of each major products. The difference between (i) and (ii) represented the adventitious gain to the refineries on account of the devaluation, which has been mopped up by leavy of additional (non-recoverable) duties. In consequence to this arrangement, the refinery economics pre and post devaluation has been kept almost on an even keel."

5.46. The following statement shows the variations made in the rates of basic and additional duties. The net relief shown in column (8) represents the extra cost to the refinery as a result of devaluation of the increase in cost of imported and/or indigenous crude, imported chemicals and equipment etc. The amount mopped up per unit of each product is shown in column (5) thereof:

Sl. No.	Product	Unit	Decrease in basic duty	Devaluation addl. duty	Net relief (4)—(5)	Increase in basic ceiling selling/ ex-refinery prices allowed w.e.f. 16-12-66	Total net relief (6)+(7)
1	2	3	4	5	6	7	8
			Rs.	Rs.	Rs.	Rs.	Rs.
1.	Aviation Spirit/ Motor Spirit .	KL	59·45	50·55	8·90	..	8·90
2.	ATF/Sup. Kerosene .	,,	69·75	33·25	36·50		36·50

1	2	3	4	5	6	7	8
3.	H.S.D. Oil .	K.L.	58·45	25·65	32·80	..	32·80
4.	Vaporising Oil .	"	58·45	27·70	30·70	..	30·75
5.	Inf. Kerosene .	"	55·10	27·90	27·20	.	27·20
6.	L.D.O. .	MT	65·22	45·20	20·02		20·02
7.	Furnace Oil .	"	36·95	21·40	15·55	..	15·55
8.	Bitumen Straight Grades . .	"	36·50	9·70	26·80	11·84	38·64
9.	Bitumen Cut-backs .	"	51·60	23·00	28·40	45·65	74·23

5.47. Explaining further about the changes in the rates of duties consequent on devaluation the Secretary of the Ministry stated during evidence:

"By levying some non-recoverable excise duty, we may be able to mop up the difference between the increased import parity on products and the increased import parity on crude. The fortuitous difference has been mopped up by levying certain additional duties which are non-recoverable. That means the oil companies are not entitled to recover them from the consumer. They fall on the oil companies.... We have levied certain non-recoverable excise duties with a view to mop up the difference—the fortuitous advantage they gained on devaluation.... I can give an example like this. Suppose a ton of crude used to cost Rs. 60|-. On devaluation it became Rs. 95|-. There was an increase of Rs. 35|- in cost.

A ton of crude which produces worth Rs. 100|- on the import parity basis yielded Rs. 150|-. Rs. 57|- was the gain as against which they had Rs. 35|- increase in the cost of crude. So, the difference that was left out was Rs. 22|-. This was mopped up from the oil companies by levying non-recoverable excise duties. This is non-recoverable in the sense that it cannot be passed on to the consumers. It must be borne by the oil companies. This gain which would have accrued to them solely, as a result of devaluation, has been taken away by Government levying this duty."

5.48. The Committee note that Government have made adjustments in the rates of basic (recoverable and additional/non-recoverable duties) consequent on devaluation so as to keep the refinery economics pre and post devaluation on an even keel. They however find that the total net relief given to the refineries as a result of these adjustments to compensate them on account of extra cost, due to increase in the cost of imported and or indigenous crude, imported chemicals and equipment etc. as a result of devaluation, ranges between Rs. 8.19 per kilolitre in the case of motor spirit and Rs. 74.23 per metric tonne in the case of Bitumen cutbacks. In the case of kerosene superior, the net relief to the refinries is Rs. 36.50 per kilolitre. The Committee are doubtful if the reliefs provided in all these cases are justified. Since the pricing of petroleum products is a complicated matter and has been further complicated by the devaluation of the rupee, the Committee recommend that the question of pricing of refinery products should also be gone into thoroughly by the committee of experts suggested by them in para 5.24.

(iii) *Prices of petroleum products in India and other countries*

5.49. The Committee desired to be furnished with a comparative statement regarding the price of petroleum products paid by consumers in India and other countries. Government have stated that difference grades of petroleum products under different nomenclatures are marketed in different countries and the prices of such products in each country differ depending upon the source from which supply is drawn, as the f.o.b. cost, ocean freight, etc. from such source to the importing country differ depending upon the postings in such source, the distance from such source to the importing country etc. Other factors which contribute to prices are duties, taxes, etc. levied in the countries concerned. Also the consumer prices in the same country may differ from place to place depending upon the distance of such place from the main port of supply, as rail or road freight and other charges are incurred by the distributing companies in arranging supplies from the main port to the places at up-country points. As such, a comparison of the consumer prices of petroleum products in India with those obtaining in foreign countries may not be useful. The Government have, however, furnished the following three statements showing the comparative prices of some selected products viz. gasolines, kerosenes and lubricants as on 31-12-1965 in various countries and ex- Bombay. The government have also stated that the latest prices in foreign countries are not known to them and hence comparison with the current prices in Bombay was not possible.

Statement showing retail prices including duties and taxes of selected petroleum products in selected countries (as on 31-12-1965)

(i) *GASOLINE*

(U.S. Cent per U.S. Gallon)

Country	Region/City	Grade	Retail price	Duty	Taxes
1	2	3	4	5	6
U.S.A. .	Washington D.C.	Regular .	31·9	1·26	10·0
		Premium .	36·9	1·25	10·0
U.K. .	London	Regular (90 Octane)	56·8	37·7	..
		Premium (97 „)	60·0	37·7	..
		Premium (100 „)	62·8	37·7	..
		Aviation (100/130 Octane) .	60·8	37·7	..
Pakistan .	Karachi .	Regular (79 Octane)	56·0	28·0	12·0
		Aviation (100/130 Octane) .	63·0	28·0	10·0
Japan .	Tokyo .	Regular .	50·5	2·3	30·2
		Premium .	58·9	2·3	30·2
Italy		Regular (84/86 Octane) .	66·5	2·8	46·9
		Premium (98/100 Octane) .	72·6	3·0	47·8
		Aviation (100/130 Octane) .	76·4	2·9	46·5
India .	Bombay	Regular (79 Octane)	68·3	36·3	8·7
		Aviation (100/130 Octane) .	69·4	36·3	4·0
West Germany	Hamburg	Regular (91/93 Octane) .	54·4	6%	30·3
		Premium (89/100 Octane) .	60·1	6%	30·3
		Aviation .	59·6	6%	27·0
France .	Paris	Regular 89 R Octane	72·1	0·5	54·9
		Premium 97 „	79·0	0·5	57·6
		Aviation (100/130 Octane) .	82·2	0·8	57·4

1	2	3	4	5	6
Canada	Ottawa	Regular	33·9	0·8	13·2
		Premium	37·9	0·8	13·2
		Aviation (100/130) Octane)	34·7	0·8	2·1
Burma	Rangoon	Regular (78 Octane)	39·7	n.a.	n.a.
		Aviation (100/130 Octane)	48·2	n.a.	n.a.
Australia	Melbourne	Regular	34·2	11·5	0
		Premium	36·6	11·5	0
		Aviation (100/130 Octane)	33·5	8·9	0
Ceylon	Colombo	Regular (70 Octane)	56·0	36·0	0
		Premium (90,,)	57·0	36·0	0
		Aviation (100/130 Octane)	64·0	39·0	0

(ii) KEROSENE

(U.S. Cent per U.S. Gallon)

Country	Region/City	Grade	Retail price	Duty	Taxes
U.S.A.	Washington	n.a.	n.a.	n.a.	n.a.
U.K.	London	Regular	23·0	1·9	..
		Premium	26·7	1·9	..
Pakistan	Karachi	Regular	21·0	3·0	6·0
Japan	Tokyo	Standard	19·3	2·1	15·8
Italy		Lighting	49·8	4·6	29·4
India	Bombay	Lighting	34·2	16·6	3%
		Power	23·2	6·6	3%
West Germany	Hamburg	Standard	59·6	6%	27·0
France	Paris	Standard	38·6	0·5	20·3
Canada	Ottawa	Regular	20·1	0·8	0
Burma	Rangoon	Lighting	21·2	n.a.	n.a.
Australia	Malbourne	Lighting	27·1	0	0
Ceylon	Colombo	Lighting	13·0	..	0

(iii) LUBRICATING OIL

(U.S. Cent per U.S. Gallon)

Country	Region/City	Grade	Retai Price	Duty	Taxes
U.S.A.	Washington D.C.	Premium	248.0	2·0	6·0
U.K.	London	SAE 20 30-40-50	256·0	2·9	..
Pakistan	Karachi	SAE 30	163·0	8·0	21·0
Japan	Tokyo	Standard	n.a.	n.a.	n.a.
Italy		Standard	..	..	..
India	Bombay	30 20	130·2	65%	5%
		30/40	160·0	65%	5%
West Germany	Hamburg	Standard	227·1	7%	30·0
		Premium	340·6	7%	30·0
France	Paris	Standard	98·0	2·5	31·7
Canada	Ottawa	Standard	170·6	12·5%	8·1
		Heavy duty	201·7	12·5%	11·2
Burma	Rangoon	Standard	158·5	..	n.a.
		Premium	184.9	..	n.a.
Australia	Melbourne	Standard	142·5	5·1	0
		Special	16·8	5·1	0
Ceylon	Colombo	Standard	113·0	29·0	0
		Premium	133·0	29·0	0

It will be noticed from the above statements that the retail prices of gasoline and kerosene are much higher in India compared to U.S.A., U.K., Pakistan, Japan, Burma, Australia and Ceylon.

5.50. Asked for the reasons for the high prices of these products in India compared to other countries many of which also imported crude and petroleum products like us, the Government have stated in a written reply "It is not possible to indicate precisely the reasons for the high prices of certain products in India compared to other countries. The principle of pricing of the petroleum products followed in India is import parity. It is not known whether in the countries mentioned also this principle is followed. There is, therefore, no real basis for comparison. One possible reason for high prices in India is the quantum of excise duty levied on these products. Some other possible reasons are as follows:

(a) The comparatively much higher consumption of petroleum products in countries like U.S.A., U.K., Japan may result in selling prices being more favourable than in a country like India with much lesser consumption.

(b) The lower level of prices in a country like Pakistan may be due to plentiful availability of other competitive fuels such as natural gas.

(c) In countries where selling prices are not determined by the inter-play of supply and demand, the prices of common user items like gasoline and kerosene may be purposely pitched at levels comparatively lower than those prevailing for other products used by industrial and other major consumers which may be in a position to carry a slightly higher burden than the ordinary consumer.

(d) The pattern of distribution may also differ from country to country. Our basic ceiling selling prices have been determined for delivery ex-companies storage points. The point of delivery in other countries may not be exactly indentical resulting in certain elements not being iincluded in the price build-up thus leading to disparities. To illustrate, our ceiling selling price ex-port/local pump of gasoline includes charges for free delivery within specified limits, whereas in some other countries no similar charge may be included or the limits of the free delivery zone and the expanse of maintaining it may be different.

(e) The characteristics of the products may also differ from country to country.

(f) Another significant factor in the way of such comparison is that our actual basic ceiling selling prices for major products are not what they should have been if the reductions in prices from time to time had been passed on to the consumers instead of being mopped up by Government. Thus, our selling prices are not realistic in the same sense as the selling prices may be in other countries.

where similar mechanism may not exist of mopping up by Government of reductions otherwise due to be passed on to consumer. In this context, any such comparison will not be fair."

5.51. To illustrate the high incidence of excise duty on petroleum products in the country, Government have furnished the following break-up of the retail price of motor gasoline 19 Octane ex-company's pump in Bombay exclusive of Octroi surcharge and sales tax:

	Rs.
(a) Ex-refinery	0·15
(b) Basic duty (recoverable)	0·54
(c) Additional duty (non-recoverable) borne by the marketing company . . .	0·038
(d) Marketing company's net charges and profit	0·122
	0·85

5.52. The Committee regret to note that the prices of petroleum products like gasoline and kerosene are much higher in India as compared to other countries like U.S.A., U.K., Pakistan, Japan, Burma, Australia and Ceylon. They are surprised that Government are not aware of the basis of pricing of petroleum products in other countries. The Committee recommend that the Government should study the pricing pattern of petroleum products in other countries particularly neighbouring countries so as to find out the reasons for the high prices of petroleum products in the country and devise measures to reduce the same. i

C. Misuse of kerosene on account of heavy excise duty on high speed diesel oil

5.53. It has been represented to the Committee that the levy of heavy exicse duty on H.S.D. has created certain problems. It has increased the difference in price between kerosene and H.S.D. to such an extent that large scale misuse of kerosene as fuel in lorries and buses has occurred and is occurring thereby resulting in loss of revenue to Government. These two products are closely allied and the wide disparity in the levy of excise duties on the products has resulted in large consumption of kerosene to the detriment of H.S.D. The excise duty on kerosene is stated to be of the order of

Rs. 240/- per kilo litre, whereas that on H.S.D. of about 510/- per kilo litre.

5.54. Asked if this was a fact, the Government have stated in a written reply that there is a difference of about Rs. 268 per tonne in the ex-installation price of kerosene and H.S.D. which acts as an incentive to use kerosene as automative fuel in adulteration with H.S.D.

5.55. As regards the steps taken by the Government to check such a misuse of kerosene it has been stated that "Last year raids on retail outlets were organised to detect and check such adulteration. The possibility of using chemical markers in kerosene is also being examined."

5.56. The Committee are unhappy to learn about the large scale misuse of kerosene as fuel in lorries and buses because of the price difference between kerosene and High Speed Diesel (H.S.D.) on account of a heavier rate of excise duty on the latter. Apart from the loss of revenue to Government caused by its misuse kerosene is also a deficit product being imported at present and is an article of daily use for the common man. The Committee would, therefore, strongly emphasise the need to take effective measures to stop the misuse of kerosene as fuel for automotion. They hope that it would soon be possible for the Government to use chemical markers in kerosene to avoid its adulteration with H.S.D.

D. Under-recoveries of freight on account of import parity basis of pricing

5.57. The pricing of petroleum products is based on the principle of import parity. Eight ports *Viz.*, Kandla, Okha, Bombay, Goa, Cochin, Madras, Vishakhapatnam and Calcutta have been made the pricing points and the country has been divided into eight economic supply areas, based on these ports. As a result of this, the price at port towns are lower than at up-country points which would in addition have to cover transport costs. For example, Barauni and Gauhati refineries are not pricing points but the prices of products from those refineries are fixed for various places with reference to the pricing point at Calcutta. As a result of this, a consumer at Barauni has to pay a higher basic price for refined products than at Calcutta. Further, if products from one area are sent to another area, the Railway freight from the pricing point of the receiving area only is recoverable; this gives rise to over or under recovery of freight which till the establishment of the public sector refineries was not a serious problem.

5.58. As a result of the inland location of three public sector refineries and the import parity basis having been adopted for pricing, heavy under-recoveries in freight are being borne by the IOC when distributing the products. The under-recoveries borne by Indian Oil Corporation on account of railway freight during the last three years is stated to be:—

	(Rs. in lakhs)
1964-65	68·92
1965-66 . . .	116·13
1966-67	113·66

5.59. The W.G.O.P. made the following observations about the position of the refineries in the East as regards under-recovery of freight is concerned:

"The position of Gauhati refinery is particularly difficult as only a small part of its production is consumed in Assam and the balance has to be sent outside. Up to Siliguri it incurs no under recovery of freight but practically for all despatches beyond Siliguri there is under recovery. According to the information supplied by the IOC about 16 per cent of the products despatched from Gauhati refinery in 1964 was sent to Assam zones, 9 per cent to the area from Assam to Siliguri and 75 per cent beyond Siliguri. Over 80 per cent of Digboi's products are consumed in Assam and the balance has to be sent outside. The position for both the refineries has been worsened by the commissioning of Barauni refinery in August 1964 as Siliguri is nearer to Barauni than to Gauhati and also the areas beyond Siliguri where Gauhati products are sent now are much nearer from Barauni, and there will be no freight under recovery, in majority of the cases (in fact some over recovery) if these areas are supplied from Barauni. The products of these three refineries are now sent not only to Calcutta supply area but also to other areas in North and North Western India falling within Bombay and Kandla supply areas. The movement is regulated by order of the Ministry allocating the products of these three refineries to different zones to reduce their under-recoveries and cross haulage. In this process, surplus from Assam refineries (in the case of Gauhati, the major portion of its production) is disposed of in zones nearer to Barauni, thus reducing Barauni's profitability. Barauni is situated 500 Kms. away from Calcutta which, with the neighbouring industrial areas constitutes the main consumption area. There is under recovery of freight if Barauni products are sent there. Thus Gauhati has not only affected the economy of AOC refinery in some measure but very markedly also that of Barauni refinery which is itself at a considerable disadvantage due to its location."

5.60. Asked if the under recoveries of freight was involved in the case of private sector refineries also, the Secretary of the Ministry stated during evidence that, under recoveries of freight was involved in the case of private refineries too. Citing the example of Bombay refineries he stated "Bombay product goes to Calcutta. In terms of C.I.F. price at Bombay and at Calcutta the difference may be Rs. 10|-. But the actual coastal freight from Bombay to Calcutta is Rs. 25|-. There is under recovery of Rs. 15|- on that." It was also stated during evidence that about 50 per cent of the products of Bombay refineries were being moved offshore to other coastal locations and that probably three-fourth, of the movement took place in foreign tankers.

5.61. Asked specifically to furnish the figures of under recoveries of freight borne by the private sector refineries during the last three years, it has been stated by Government that this information is not available.

5.62. The inland refineries in the public sector are producing substantial quanties of petroleum products. Asked to state the reasons for not treating inland refineries as the pricing points, Government have furnished the following written reply:

"One reasons for following import parity principle is the assurance given in the various refinery agreements with the private oil companies that they will be permitted to establish ex-refinery prices not higher than import parity. Making the inland refineries as pricing points would involve a breach of this agreement. Further, the system of determining prices on import parity provides a reasonably continous price pattern for each product for the whole of the country and is self-regulating. The establishment of new refineries at Cochin, Madras and Haldia is a recognition of the same economic position. The inland refineries at Digboi, Gauhati, Barauni and Koyali have been fitter into the existing pattern of pricing in relation to the main port economic supply area to avoid disturbance to the pattern of pricing and to promote the undisturbed growth of petroleum based industries on the established lines. Moreover, the coastal refineries cater to bulk of the requirement of the country. It is but natural that the inland refineries with lesser production should be fitted into the system applicable to the coastal refineries. It is not necessarily correct to assume that by treating the inland refineries as pricing points the prices to the consumers in its neighbourhood will be lower, because, in any system of pricing based on cost of individual refineries the prices of the products will depend upon crude cost, operating cost, size of refinery, capital investment etc. This may result in differene prices for the different inland refineries. In view of these factors the ex-refinery cost of the inland refineries individually determined may not essentially be lower than the relative cost based on import parity. The difference does, however, arise on account of freight, which is presently included on a notional basis from the port town, say, from Calcutta to Patna for supplies of motor spirit made from Barauni at Patna. The demand in the neighbourhood of the inland refineries is not adequate to absorb the entire production and the surplus has essentially to be moved to areas of greater demand, such as Calcutta in the South, U. P. and Punjab in the North. The surplus production will have to be sold at the import parity price in these areas, in competition with the private oil companies which move their surplus production from the coastal refineries to Calcutta by coast and to U.P. and Punjab by rail. Thus, the products of the inland refineries will sell at two different rates, one built on the basis of the inland refinery as the pricing point for the consumers in the neighbourhood and the other built on import parity for distant consumers. It is also doubtful whether this system will save losses to IOC on account of under-recoveries of freight as the surplus products may still have to be sold in the distant areas because of the paucity of demand in the neighbourhood of the inland refineries."

5.63. The Secretary of the Ministry also stated during evidence "The present arrangement is there because of crtain requirements of refinery agreements. The refinery agreement provides the necessity for the import parity as the basis for prices. Unless they are modified there is no scope for departing from import parity principle."

5.64. He also drew a distinction between pricing area and supply area and stated "there is difference between supply areas and pricing areas. Each refinery has its supply area. It may not be able to market all its products in that supply area. It has to send something outside. That is where under recovery comes. That is why there is a distinction. Pricing area is today a different concept from Supply area." Asked why should the Government cling to this basis of pricing he stated "This is one of the consequences of our refinery agreements. I think so long as this remains, we are pinned to this system. Whether a better system can be found requires consideration and will be considered as soon as we are free from this fetter."

5.65. Asked about the impact of public sector refineries on pricing of petroleum products in the country it has been stated by Government that it is 'nil' as the basic ceiling selling prices of bulk refined petroleum products are determined on the principle of import parity and this position would not change so long as the principle of import parity in the determination of the ex-refinery prices in terms of the refining agreements continue to be applied.

5.66. It was also admitted by the representative of Government during evidence that, by way of reduction in price no benefit has accrued to the consumer as the system of price fixation was quite independent of the existence of the Indian Oil Corporation.

5.67. The Committee regret to note that the emergence of the Indian Oil Corporation and the public sector refineries has not been able to make any impact on the price of petroleum products in the country as import partiy has been the basis of pricing. According to Government, the position would not change so long as the principle of import parity continues to be applied. In the opinion of the Committee this principle of import partiy, apart from standing in the way of bringing down the prices of petroleum products, has resulted in under-recoveries of freight to the tune of about Rs. 2.29 crores during the last two years by the Indian Oil Corporation. It appears that the present system of import parity is more disadvantageous to the Indian Oil Corporation than to the private sector refineries as the figures of under-recoveries by the private sector refineries were not made available to the Committee presumably because they were not quite comparable with those of the I.O.C. Further the present basis of pricing on import parity is anomalous as the price of petroleum products is more at Barauni i.e. the producing centre than at Calcutta as has been forcefully pointed out by the Committee on Public Undertakings in paras 79 and 82 of their 35th Report (Third Lok Sabha) on I.O.C. (Marketing Division). The Committee share the views of the Committee on

Public Undertakings in this regard and recommend that Government should expeditiously find a way out of the anomalies pointed out by the Committee on Public Undertakings. The Committee consider that the refinery agreements with the coastal refineries should not stand in the way of any solution to this problem as the throughput of the coastal refineries has been more than doubled since the conclusion of these agreements in 1951, and the original clause in this regard could at best be applicable to the original capacity.

E. Refining costs per tonne

5.68. Operating costs are stated to be within the control of the companies. The Government however keeps on stressing on the companies the need for effecting economy in the cost of their operations. The per tonne refining costs of private sector refineries and the public sector refineries for the year 1963 to 1967 have been furnished by the Government which are as follows. The Government have also stated that the figures are not exactly comparable with the figures of the private sector refineries on account of the fact that the processes involved are different for each refinery depending upon the products being produced. Besides, facilities like Water, Power, etc. in respect of the public sector refineries are their own as against the private sector refineries who draw these facilities from the common grid.

Comparative Refining Cost per tonne

(X) Excluding interest

(Y) Including interest

Coastal Refineries IOC Refineries (financial year)		1963 1963-64	1964 1964-65	1965 1965-66	1966 1966-67
1		2	3	4	5
Burmah Shell					
Throughput in	MT	3759711	3750264	3996336	4007813
	X	21·49	21·14	21·17	26·96
	Y	..	..	..	..
Caltex					
Throughput in	MT	1026000	1058131	1115659	1286000
	X	20·27	18·99	18·39	19·58
	Y	21·29	19·98	22·73	20·36

1	2	3	4	5
Esso				
Throughput in MT	2404000	2720590	2599958	277697
X	14·86	11·18	12·98	12·33
Y	16·11	12·19	13·04	13·11
Gauhati				
Throughput in MT	543534	749184	799434	742946
X	37·50	27·35	22·17	24·62
Y	43·94	33·00	26·53	28·56
Barauni				
Throughput in MT		Trial run	744540	1113885
X		..	39·78	31·86
Y		..	52·44	42·70
Gujarat			(Jan. to March)	
Throughput in MT			267215	1377537
X			37·46	25·76
Y			43·75	31·66

It may be noticed that there are wide variations in the refining costs per tonne of the refineries which during 1966-67 ranged from Rs. 12.33 in the case of Esso to Rs. 31.86 in the case of Barauni.

5.69. Explaining the reasons for such wide variations in the refining costs per tonne the Secretary of the Ministry stated during evidence that one should compare the costs at comparable periods in the life of a refinery as the costs were certainly going to be higher in the beginning, coming down as the throughput increased.

5.70. On being asked to furnish figures of the operational costs of the refineries in the public/private sector during the first three years of their operation the following figures have been furnished by the Government:

Comparative Refining Cost per metric ton (rupees)

Burmah-Shell			Esso			Caltex		
1955	1956	1957	1955	1956	1957	1957	1958	1959
25·03	28·06	30·23	24·62	21·81	20·81	35·45	32·22	28·14

Gauhati			Barauni		Gujarat	
1962-63	1963-64	1964-65	1965-66	1966-67	1965-66 (Jan-Mar '66)	1966-67
75·52	43·94	33·00	52·44	42·70	32.77	26·21

5.71. At the present stage of their operations, the public sector refineries are stated to be operating at refining costs which are higher than the private sector refineries mainly because of their higher capital cost.

5.72. The Government have also stated that the capital investment in the public sector refineries is high, *e.g.* for Barauni refinery India Oil Corporation had to spend nearly Rs. 45 crores for its 2 million ton stage, whereas Burmah Shell for a similar refinery spent only Rs. 25 crores. This is the result of their inland location, provision of facilities and amenities not found in other refineries (*e.g.* power plant, large housing colony) and technological reasons related to the nature of the crude oil to be processed. The public sector refineries were built many years later, when costs had gone up substantially.

5.73. Asked if the costs of production of the refineries in the public sectors have ever been systematically examined by the Cost Accounting Branch of the Finance Ministry the Government have stated, "An examination of the cost of production of the refineries in the public sector has not so far been made by the Cost Accounting Branch of the Finance Ministry. In the case of Indian Oil Corporation Ltd., the Barauni and Koyali Refineries have yet to attain their full rated throughputs. The Cochin refinery has gone into commercial production only from 26th May, 1967."

5.74. During evidence the Secretary of the Ministry stated that it was too early to undertake a detailed cost study as the Government would like these refineries to stabilise at their optimum levels. He added that Indian Oil Corporation has a rigid system of cost accounting and that they have a month to month profit and loss statement.

5.75. The Committee are unhappy to note that the refining costs per tonne of the public sector refineries do not compare favourably with the corresponding costs of the private sector refineries. While this may partly be due to the higher capital costs of the public sector refineries, there is enough scope for improvements in this regard. The Committee, therefore, emphasise upon the Government the need to reduce the operational costs of the refineries in the public sector and for this purpose they consider it rather essential that a periodical examination of the costs of production of these refineries should be conducted by an outside agency i.e. other than Indian Oil Corporation.

F. Refining Margin

5.76. Refining margin, which is a concept used in refinery economies, is the difference between the cost of a barrel of crude oil import and the receipts from its refined products. After deducting the cost of refining from the gross refinery margin, the income from refining is obtained, which is a measure of its profitability. The refinery margin is a true index of the working efficiency of a refinery.

5.77. The following statement furnished by the Government shows the refinery margins/processing fee per tonne:

(Rupees)

	1962	1963	1964	1965	1966
Private Sector					
1. Burmah-Shell (processing fee)	43·38	37·37	35·61	32·35	40·77
2. Esso (Margin)	32·88	30·71	22·72	20·96	16·43
3. Caltex (processing fee)	27·58	25·63	21·06	20·76	20·83
	1962-63	1963-64	1964-65	1965-66	1966-67
Public Sector					
1. Gauhati (Margin)	34·40	39·77	37·65	40·10	42·84
2. Barauni (Do.)	..	..	..	36·62	46·19
3. Gujarat (Do.)	..	..	..	30·91	29·54

5.78. The Committee are glad to note that the refinery margins of the public sector refineries compare favourably with the refinery Margins/processing fee in the case of private sector refineries.

G. **Committee set up by Government**

5.79. Two committees had been set up by the Government during this decade in connection with the fixation of selling prices of various petroleum products in the country. The following are the details about these committees and their terms of reference etc.

(i) Oil Price Enquiry Committee

5.80. The Government of India, Ministry of Steel, Mines & Fuel, Department of Mines and Fuel, in their Memorandum No. 101(11)|60-PPD, dated the 2nd August, 1960 appointed a committee consisting of the following members to examine the principles and elements according to which the selling prices of various petroleum products in India should be determined after 1st April, 1961 and to submit its recommendations by December, 1960:

(1) Shri K. R. Damle, I.C.S., Secretary to the Government of India, Ministry of Food and Agriculture (Department of Agriculture)—Chairman.

(2) Shri P. N. Sapru, M. P.—Member (resigned w.e.f. 14-3-61 on grounds of ill health. Shri C. P. Sinha retired Chief Justice of Assam High Court was appointed as a member in his place).

(3) Shri N. Krishnan, Chief Cost Accounts Officer, Ministry of Finance, Government of India—Member.

5.81. In conducting the enquiry the committee was requested *inter alia* to examine and report on:—

(a) The cost at which crude oil and the various refined petroleum products can be imported;

(b) whether the "port charge elements" in oil prices can be adjusted on a flat basis irrespective of the particular port to which any supply area is linked;

(c) in keeping with the relevant clauses of the existing Agreements relating to the establishment of the two refineries at Bombay and the refinery at Vishakhapatnam, how should the ceilings be determined for the ex-refiniery prices of their products;

(d) whether the time is opoprtune for evolving a railway freight pool system in respect of oil products;

(e) whether along with such pooling, or irrespective of the same, for reduction of the imbalance in consumption particularly, principles can be evolved for having a common tariff of railway freight in respect of petroleum products irrespective of whether they are of the dangerous or non-dangerous category;

(f) to what extent more efficient and economic arrangements can be introduced for unloading, storage and distribution of petroleum products inland;

(g) the best manner in which the oil industry can enlist service cooperatives in the marketing and distribution of such petroleum products as are in daily use in almost every household like, particularly kerosene.

(h) in keeping with the needs of conservation of foreign exchange, stabilisation of prices, raising of internal resources and the overall development of the planned economy, to what extent the pricing mechanism in respect of petroleum products should be used for purposive influencing change, stabilisation of prices, raising of internal resources, patterns.

5.82.The Oil Price Enquiry Committee submitted its report on the 19th July, 1961. This committee recommended *inter alia* a pricing formula on the basis of import parity for bulk refined petroleum products (*e.g.* aviation gasolines, aviation turbine fuel, motor spirit, high speed diesel oil, kerosene superior/inferior, vaporising oil, light diesel oil, furnace oil) and bitumen. On account of the difficulty of evolving a pricing formula for a multiplicity of grades of lubricants, greases, and specialities, with varying specifications, the Oil Price Enquiry Committee recommended a system of block control on marketing charges and profits in respect of these categories of products.

5.83. The recommendations of Oil Price Enquiry Committee were accepted by Government *in toto* and implemented with effect from 1st October, 1961; to remain in force upto 31st March, 1965. This arrangement was subsequently extended upto 31st January, 1966.

(ii) *Working Group on Oil Prices* (*WGOP*)

5.84. Later on in 1964 the Government of India in the Ministry of Petroleum and Chemicals, in their Memo. No. 101(35)|63-PPD, dated the 12th May, 1964, appointed a Working Group consisting of the following members, to determine the ceiling prices ex-companies storage points of various petroleum products in India:

1. Shri J. N. Talukdar, I.C.S. (Retd.) ex-Chief Secretary Government of West Bengal, Calcutta—Chairman

2 Shri S. S. Shiralkar, Additional Secretary, Ministry of Finance—Member

3. Shri N. Krishnan, Chief Cost Accounts Officer, Ministry of Finance—Member

5.85. The Working Group was also requested to examine and report on:

(i) the manner of determination of the ex-refinery prices of refined petroleum products, including bitumen produced by the refineries;

(ii) the manner of determination of landed prices in respect of similar products which may be imported;

(iii) determination of marketing and distribution charges of products mentioned in (i) and (ii) above;

(iv) the determination of ceiling selling prices in respect of lubricating oils, greases and specialities;

(v) the possibility of linking prices with the physical supply areas for the products of individual refineries, and to consider the possibility of uniform or pool prices for the whole of the country or in different zones which may be created for the purpose.

5.86. The Working Group on Oil Prices submitted its report in August, 1965. The Report has been implemented by the Government with certain modifications which provide for the following variations from the report of the Working Group:

(a) A protective import duty of 20 per cent *ad valorem* was imposed on crude oil.

(b) The price of indigenous crude was increased to the extent of the discounts available to the refineries on imported crudes of equivalent quality.

(c) Ex-refinery prices of bulk refined products have been fixed at higher levels on the basis of import parity starting with full f.o.b.'s posting (*i.e.* without discounts as in the past since 1961).

The decision at (c) was stated to have been taken to compensate to the extent necessary for the effect of the decisions at (a) and (b) on the economics of the refineries.

5.87. According to Government of India Resolution dated the 1st February, 1966 the decision about the prices of oil products was to remain in force till 31st December, 1967 to begin with and Government could extend their validity for a further period or periods.

5.88. Asked what was the basis of selecting the personnel, composition of these bodies and what were the reasons for not associating persons with intimate knowledge of petroleum technology with these bodies, the Secretary of the Ministry stated during evidence that there was no problem of refining or technology involved as the two committees were essentially appointed to advise on the prices to be fixed in the marketing operation returns. This was stated to be essentially an economic study like Tariff Commission Enquiry as to the prices etc. He also added that Shri K. R. Damle was formerly Chairman of the Tariff Commission. As regards Shri J. N. Talukdar who was Chairman of the Working Group on Oil Prices, the Committee had been informed by Shri Talukdar himself that he had little acquaintance with the oil industry till 1964 when he was asked to take up this enquiry.

5.89. The Committee are not convinced by the reasons advanced by Government for not associating persons acquainted with the petroleum industry with the two committees set up to advise them on petroleum prices in the country. They feel that the apopintment of persons having an intimate knowledge of petroleum industry and of its marketing techniques would have been of distinct advantage particularly as the petroleum industry is a very complicated industry and has world wide ramifications. It is well known that international oil cartels operate in this industry and influence product prices. The Committee have recommended the appointment of an expert committee to go into the question of fixation of prices of indigenous crude and petroleum products in paras 5.24 and 5.48 of this report. They hope that earnest consideration would be given to the selection of competent men in appointing this expert committee.

VI

IMPORTS/EXPORTS

A. Imports of Crude

6.1. There was no import of crude till 1954 as there was no refining capacity available in the country excepting the Digboi refinery with an operating capacity of .45 million tonnes only. In the Agreements made by the oil companies with the Government of India in the years 1951 and 1953 under which the three coastal refineries have been established, the oil companies have been given the freedom to make arrangements for importing crude oil from source of supply of their own selection, subject to the obligation to use under certain conditions crude oil produced in India Accordingly these coastal refineries are processing imported crude excepting for a small quantity of indigenous crude from Ankleshwar field processed by the Bombay refineries. In addition the Cochin refinery in the public sector which went on stream in 1966 is also processing imported crude. Refineries at Madras and Haldia which are expected to go on stream in 1969 and 1970 respectively would also be processing imported crude.

6.2. Government have furnished the following figures regarding the quantities/values of crude imported since 1954:

Year	Quantity (in 000' tonnes)	Value (Rs. lakhs)
1954 . .	496	not available.
1955 .	3004	„
1956	3710	„
1957 . . .	4368	„
1958 . .	4608	„
1959 . . .	5327	741·21
1960 . .	5723	4057·49

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Year	Quantity (in ooo'tonnes)	Value (Rs. lakhs)
1961 . . .	5968	3931·15
1962 . . .	6022	3872·92
1963 . . .	5519	4178·42
1964 .	6791	4259·04
1965 .	6811	4937·89
1966 . . .	7457	5610·37

6.3. As regards the position during the Fourth Plan period Government consider it unlikely that India can produce by 1971 all the crude oil needed for the refineries in the country. According to the Government the imports will be necessary for the entire Fourth Plan period and perhaps thereafter also.

6.4. Assessing the future requirements of crude and its indigenous production, the Secretary of the Ministry of Petroleum and Chemicals stated during evidence that "Our estimate of crude production by 1970-71 is between 9 to 10 million tonnes from areas in which we have discovered oil hitherto and our requirements may be 20 to 22 tonnes....as such there will be a gap of 11 million tonnes. By about 1975-76 our rough idea is that the production might be 16 million tonnes and demand may be 30 million tonnes....the gap is increasing—from 11 million tonnes it will go upto 14 million tonnes....The balance, of course, has to be imported. Some of it is already arranged for on forward basis. For example, the requirements of the Madras refinery have been contracted for with our partners in the Madras refinery. Similarly, part of the crude for the Haldia refinery has been contracted for with our collaborators. We expect some part of the balance to be met by our share in crude in the Iranian venture." He estimated the import bill for crude at about Rs. 110 crores per year in foreign exchange.

6.5. The Indian Institute of Petroleum has gone a step further in estimating the need for a refinery capacity of 32 million tonnes by 1975 which would obviously increase the gap between the indigenous production of crude and its total requirements.

6.6. The Committee are perturbed at the ever increasing import bill for crude. They note that the gap between the indigenous pro-

duction of crude and its total requirements would continue to widen in the coming years resulting in an increasing outflow of foreign exchange. The Committee realise that import of crude for processing in the country is more economical that the import of finished petroleum products particularly as the requirements of petroleum products are ever increasing. **The Committee, therefore, re-emphasise the urgent need for increasing the indigenous production of crude at a faster rate to reduce the foreign exchange drain as much as possible.**

6.7. The Committee would also like the Government to explore the possibility of importing the entire crude requirements of the country through a single agency viz., the I.O.C. as that would result in substantial economy because of the large scale bulk purchases involved. They hope that in the interest of reducing the drain on the foreign exchange resources of the country Government would make every effort to pursuade the oil companies to agree to the modification of their agreements to give up their rights of importing crude from their own sources.

B. Imports of Petroleum Products

6.8. The main petroleum products in which, the country is stated to be deficient at present are aviation, gasoline, kerosene superior and lubricanting oils. The following statement shows the imports of these products during the years 1961—65;

Imports of Main Deficient Petroleum Products during 1961—65.

(Q=Quantity in Metric tons)
(V=Value in lakhs of Rs.)

Product		1961	1962	1963	1964	1965
1. Aviation Gasoline 115/145	Q	24,265	32,956	19,657	29,588	28,699
	V	73·31	96·15	59·21	89·55	87·63
2. Kerosene Superior .	Q	1011,756	1031,879	757,983	725,949	1122,342
	V	1597·37	1633·83	1220·61	1082·42	1391·59
3. Lubricating Oils. . .	Q	300,768	229,132	353,285	363,257	269,088
	V	1473·80	1146·35	1784·96	1995·96	1320 67

6.9. In April 1965. Government decided to discontinue imports of kerosene, etc., from free sources and to resort to imports from the U.S.S.R. and Rumania. The foreign oil companies *viz.* Burmah Shell, Esso and Caltex declined to handle the distribution of bulk petroleum products imported from these sources. Their distribution had to be undertaken by the I.O.C. It has been stated by Government that the import of bulk refined petroleum products except Avgas are now being channelised only through the I.O.C. In the case of Avgas also the imports are stated to be made through the I.O.C., as far as possible.

6.10. During evidence the Secretary of the Ministry, however, stated that kerosene was imported entirely by the I.O.C. and lubricating oils are imported by three or four oil companies of the private sector. These companies were also stated to be importing small quantities (approx. 50 to 60 thousand tonnes) of aviation gasoline.

6.11. The following statement furnished by the Government indicates the import requirements of petroleum products during the Fourth Plan period:

Statement showing import requirements of Petroleum Products during Fourth Plan period.

Q=quantity in '000 tonnes.
V=C.I.F. Value in Rs. lakhs.

	1966-67 (Actual)		1967-68 (Estimated)		1968-69 (Estimated)		1969-70 (Estimated)		1970-71 Estimated	
	Q	V	Q	V	Q	V	Q	V	Q	V
Aviation Gasoline.	67·4	300·78	22·0	107·80	22·0	107·80	22·0	107·80	22·0	107·80
A.T.F.	268·1	542·38							..	
Alkylate/Topanol	..	..	15·3	87·00	30·5	174·00	30·5	174·00	30·5	174·00
Kerosene	696·8	1360·09	4471·3	942·60	400·0	800·00	250·0	500·00	200·0	400·00
H. S. D.	186·2	326·16	..							
Furnace Oil	197·2	198·36								
Lubricants	385·4	2671.92	385·0	2790·0	400·0	2920·0	374·0	2730·20	224·0	1635·20

(i) Import of Lubricants

6.12. From the above two statements it will be noted that lubricating oils had been imported during the Third Plan period on an average of 3 lakh tonnes per year costing about Rs. 15 crores. The corresponding figures for the Fourth Plan period are estimated at an average import of 3.5 lakh tonnes per year costing over Rs. 25 crores annually.

6.13. From the information furnished by Government it has been observed that quite a substantial portion of imports of finished lube oils, greases, base oils and additives during the last three years were made from U.S.A., U.K., France, Italy etc. Asked to state what part of the imports of lubricating oils were under rupee payment arrangements, Government furnished the following figures of imports of lubricants under the rupee payment arrangements:

(Rs. lakhs.)

	1964-65	1965-66	1966-67
Finished Lube Oils :			
Rumania	34·73	37·65	157·50
Yugoslavia .	..	..	159·50
Lub. Greases	Nil.	Nil.	Nil.
Base Oils :			
Yugoslavia .	146·52	180·50	253·48
Additives		..	..

6.14. Government have also stated that in the rupee payment area, these products are available only from Rumania and Yugoslavia and quantities of these products supplied during these years represent the capacities of the countries to export the items. Whatever was available from them was obtained and the remaining quantities were procured from free foreign exchange sources.

6.15. Asked if the import of lubricants etc., which are at present imported by three or four oil companies, could not be channelised through a single agency *e.g.*, the I.O.C. which would lead to a more economical arrangement the Secretary of the Ministry stated during evidence "On lubricants we had not so far considered the possibility for importing through one channel at the best price that can be secured. But after the Committee's questionnaire reached us we have taken up this matter for consideration. We are trying to see whether we can import all requirements through one channel at the best competitive price....There is one limitation. A substantial part of our import has necessarily to be taken from the U.S.A. It is procured with the U.S. Aid Funds. How exactly we should be all to operate through this one channel from this one source is a matter which requires detailed examination. This is what we are doing today."

6.16. The Committee have already commented upon the delay in setting up of lubricating oil plants in the country as a result of which the demand for these products had to be met almost entirely through import involving huge amounts of foreign exchange. The Committee are unhappy to note that lubricating oils will continue to be imported throughout the Fourth Plan period at an average rate of 3.5 lakh tonnes per year costing over Rs. 25 crores a year. In view of the heavy amounts of foreign exchange involved in the imports, the Committee cannot over emphasise the need to channelise the imports of lubricants through the I.O.C. which as the sole importer of bulk quantities, would be in a much better position to purchase them at the most competitive prices.

(ii) Imports of Koresene

6.17. From the statement indicating the import requirements of petroleum products during the Fourth Plan period it would be seen that substantial quantities of kerosene will have to be imported during the entire Fourth Plan period.

6.18. The Secretary of the Ministry stated during evidence that the production of kerosene during 1967 was 1.2 million tonnes in Public Sector, 8 million tonnes in the private sector and ·5 million tonnes had to be imported thus making a total of 2.5 million tonnes. He also stated that according to the latest estimates of Government, the country was likely to be self-sufficient in kerosene by 1970-71 provided Haldia refinery was completed in time. A provision for import of 2 lakh tonnes of kerosene costing Rs. 4 crores had however been made for 1970-71 only as a precaution against any possible delay in the completion of this refinery. He added that actual import will be allowed by the Government only after considering the supply/demand position existing at that time.

6.19. As already stated the entire imports of kerosene since 1965 onwards have been made through the I.O.C. as Government had then decided to import this item from U.S.S.R. and Rumania.

6.20. While the Committee regret that kerosene will continue to be imported even during the Fourth Plan period, they are happy to note that this product is imported through one organisation only viz., the I.O.C. The Committee hope that the Government will make every effort to see that the country attains self-sufficiency in kerosene positively by the end of the Fourth Plan period and that there will not be any need to import this product thereafter. In this connection the Committee would also refer to their earlier recommendation in para 4,72 on this subject.

C. **Exports**

6.21. Exports of petroleum products are being made by the foreign oil companies in the private sector since 1955. Prior to that M|s Assam Oil Co. have been producing paraffin wax in their refinery at Digboi and surplus production was being exported by M|s Burmah Shell.

6.22. The first coastal refinery (S.V.O.C. now ESSO) based on imported crude came on stream in July 1954 and the second coastal refinery (Burmah Shell) also based on imported crude went into production in January 1955. Both these refineries have been *inter alia* producing motor spirit, kerosene, High Speed Diesel, Light Diesel Oil, Furnace Oil. Burmah Shell refinery also produce Bitumen| Asphalt. Motor spirit and Furnace Oil being surplus were exported for the first time in August 1955. These two products were exported to Australia, New Zealand, East Africa, Ceylon, Philippines, Singapore, Burma and West Pakistan.

6.23. The third coastal refinery (Caltex), also based on imported crude, came on stream in April 1957 and there was further surplus motor spirit and Furnace Oil. This position continued upto the end of 1959 and in the beginning of 1960 exports of furnace oil were stopped as the internal demand for this product increased due to rapid industrialisation of the country. In 1961 and 1962 small quantities of Bitumen|Asphalt were also exported by S.V.O.C. (now ESSO). Motor spirit exports declined in 1964 as there was indigenous demand for naphtha.

The oil companies in the public sector did not export any petroleum products upto the end of 1966 and exports by Indian Oil Corporation started only from January 1967.

6.24. As per information furnished by the Government at present the exportable surplus petroleum products are motor spirit|naphtha, High Speed Diesel, Furnace Oil and paraffin wax. Exports of these products are being made by the international oil companies (Burmah Shell, ESSO and Caltex) operating in India, as well as by Indian Oil Corporation Ltd. (in 1967). While motor spirit and naphtha exports are, at present, being made to Singapore, New Zealand, Japan, U.K. and U.S.A. Paraffin wax is exported to various countries all over the world. High Speed Diesel and Furnace Oil are being exported to Thailand.

6.25. Paraffin wax is produced only at the Assam Oil Company Refinery at Digboi. Its export in recent years had declined mainly due to increase in internal consumption and decline in production. Looking to the heavy demand in the country and reported shortages of paraffin wax it has been decided by the Government to reduce the exports of paraffin wax to the extent of 50 per cent of the last year's (1966) exports.

6.26. Owing to the establishment of new refineries and|or expansion of existing refinery capacity almost all over the world, the international oil companies, operating in India, are, it is understood, finding it increasingly difficult to get suitable markets for exports of motor spirit. Till lately Burmah Shell, one of the principal exporters of motor spirit used to dispose of the bulk of their motor spirit in Singapore in addition to arranging a few exports to the Isle of Grain in U.K. There is a glut in motor spirit supplies at Singapore and the disposal in this market is practically blocked. In view of their difficulty in exports of Motor Spirit, Burmah Shell, depending upon circumstances and type of demand at the time, are exporting either "leaded" or "unleaded" motor spirit for delivery either to a refinery for further processing or to a marketing company for subsequent sale to an ultimate consumer. The other two exporters *viz.* ESSO and Caltex have been exporting naphtha only in lieu of motor spirit. Both naphtha and "unleaded" motor spirit fetch much lower netback on their exports as compared to exports of finished grades of "leaded" motor spirit.

6.27. Indian Oil Corporation started their exports ex-Cochin port only in the beginning of 1967. They exported high grade motor spirit (leaded) or motor spirit (unleaded) *i.e.* naphtha, High Speed Diesel and Furnace Oil during the first half of 1967. State Trading Corporation is also stated to be helping Indian Oil Corporation in disposing of their surplus products *viz.*, naphtha. State Trading Corporation has also exported petroleum coke to African countries.

6.28. Statement I indicates the position regarding exports of main petroleum products from the country since 1955.

Statement II indicates the names of different countries to which exports have been made during the year 1963 to January, 1967.

Statement I

Statement showing Exports of Petroleum Products.

Q=*Quantity.*

V=*Value in Rupees lakhs*

	Motor spirit		Furnace Oil		Asphalt		Paraffin wax		Naphtha		H.S.D. Oil	
	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V
1955 LT .	72,188	128·90	117,870	87·56			22,497	138·48		..	..	
1956 LT .	80,785	143·48	263,463	192·70	..		25,511	176·17	..	..		
1957 LT .	203,088	355·73	210,792	175·17			23,914	162·84				..
1958 LT .	210,429	359·87	162,802	113·17			21,388	159·37				
1959 LT .	172,146	287·47	33,988	21·81			21,123	144·57				
1960 MT .	204,883	329·32	..	....	..	..	20,178	132·00			..	..
1961 MT .	193,573	290·36		..	4,986	7·00	12,695	78·99		..		..
1962 MT. .	206,008	295·37			9,911	13·94	11,250	75·72				

1963 MT .	364,759	481·86		..	..		11,490	68·03	..	..	..	..
1964 MT .	306,162	382·43		..	..		11,240	63·38	57,753	37·91	..	..
1965 MT .	226,496	256·34		..	..	..	11,281	59·18	106,904	76·12	..	..
1966 MT .	221,955	339·12		..	..	..	9,556	65·27	498·192	471·24		..
1967 (Jan.-June)	70,689	162·56		..	..	..	3,394	26·95	254·571	256·73		
Private Sector	70,689	162·56	..	..	..		3,394	26·95	254·571	256·73		
Public Sector	20,302	41·15	15,062	8·84	..	..		..	28,853	36·53	47,701	62·54

Statement No. II

Exports of Bulk Refined Petroleum products during the period 1963 to January/June 1967.

(in order of importance)

	Quantity (M. T.)	Value (Rs./Lakhs)
1. Singapore	673,032	983·98
2. U. K.	546,275	563·67
3. New Zealand	331,860	381·51
4. U.S.A.	197,557	151·50
5. Japan	117,493	121·55
6. Thailand	83,065	112·53
7. Holland	97,419	78·57
8. Malaysia	57,340	72·73
9. Australia	33,680	44·80
10. Aden	28,611	40·03
11. East Africa	30,826	39·63
12. Behrain	15,407	13·75
13. Indonesia	6,836	9·11

6.29. It will be seen that Singapore has been the oldest and best market for Indian petroleum products followed by U.K., New Zealand, U.S.A., Japan, Thailand, Holland, Malaysia, Australia, Aden, East Africa, Behrain and Indonesia. It has also been stated that Singapore, U.K., U.S.A., Thailand and Japan are the current important markets.

6.30. The Committee note that the country has at present an exportable surplus of motor spirit/naphtha, high speed diesel, furnace oil. They are glad that paraffin wax produced at the Digboi refinery is being exported to various countries all over the world.

6.31. The Committee note that there is a glut in motor spirit supplies at Singapore practically blocking the disposal in this market as a result of which the oil companies have been forced to export naphtha and 'unleaded' motor spirit which are stated to fetch much lower price. The Committee, therefore, urge the Government to make intensified efforts through the State Trading Corporation and otherwise to explore alternate markets for motor spirit, as the exportable surplus of this product is likely to increase in the coming years with the commissioning of Madras and Haldia refineries and the expansion of Barauni and Gujarat refineries.

D. Export Potentiality of Products

6.32. Asked if Government have made any efforts either to introduce products having export potentiality or to increase the export potentiality of the surplus products through suitable modifications, Government have stated in a written reply that "No specific instructions have been given to the refineries in this respect. But the oil companies themselves have been manufacturing these products with an eye on the demands of their foreign consigners, because under the refinery agreements the oil companies in the private sector are responsible for the disposal of their surplus products. They have therefore been manufacturing S.R. Tops|Naphtha, motor spirit 80 Octane (leaded|unleaded), motor spirit 83 Octane (leaded|unleaded), C.C. Gasoline and Platformate, as per the requirements of foreign buyers.

Cochin Refineries Ltd., in their refinery at Cochin have also manufactured 95 Octane motor spirit for supply to Thailand by the Indian Oil Corporation Ltd."

6.33. The Committee are unable to appreciate why Government have not made any special efforts to increase the export potentialities of petroleum products of the country's refineries. In view of the rapid increase in the refining capacity envisaged in the Fourth Plan

period, the Committee strongly stress the need for ascertaining the export potentiality of the surplus items that would be coming out of the refineries. Since Government are stated to be constantly reviewing the product pattern of all the refineries, the Committee would like the Government to keep this aspect also in view so as to suggest such changes in specifications of the products as would help them in finding ready foreign markets.

VII

AGREEMENTS WITH OIL COMPANIES

A. Efforts to modify Agreements with private Oil Companies

7.1. There are three agreements with foreign oil companies namely, agreement dated 30-11-1951 with Standard Vacuum Oil Company (now Esso Standard Eastern Inc.), agreement dated 15-12-1951 with Anglo-Saxon Petroleum Company Ltd. and Burmah Oil Company Ltd. (Burmah-Shell Refinery) and agreement dated 28-3-1953 with Caltex (India) Ltd., (Caltex Refinery). Under these agreements and the revisions subsequently agreed upon, the following capacities were licensed:

	Crude oil throughout in million tonnes per annum.
ESSO Refinery .	1·90
Burmah-Shell Refinery. .	2·00
Caltex Refinery.	0·675

7.2. A number of assurances and concessions regarding importing of crude oil, pricing of petroleum products, duties and distribution etc. were granted to these oil companies under the respective agreements as listed below:

.	Burmah-Shell	ESSO	Caltex
Price	Para 7	6(6)	7
Duties .	Para 9(7),(8)&(9)	6(4),(10)&(11)	9(h),(i) &(j).
Import and distribution.	Para 9(6)	6(3)	9(g).

7.3. Besides the above the respective agreements contained the assurances that for a period of 25 years from the commencement of full-scale refinery operations the same shall not be acquired nor its operation taken over by the Government and if it is acquired thereafter a reasonable compensation shall be paid. An assurance was also given that in the matter of taxation the Indian company will not be treated less favourably than if it would have been operating in India as a subsidiary of the parent foreign company.

7.4. It has been stated that these companies have surrendered the concession regarding duty protection voluntarily even before the expiry of 10 years mentioned in the agreements. The Burmah Shell and ESSO refineries surrendered duty protection on motor gasoline with effect from 1-10-1956 and Caltex refinery with effect from 1-10-1959. The duty concessions on diesel oil, fuel oil etc. were also surrendered by these cmopanies from the dates indicated below:—

ESSO Refinery .	15-11-60
Burmah Shell Refinery. .	1-7-59
Caltex Refinery	1-4-63

It has been stated that none of the private sector oil companies enjoy any duty protection at present.

7.5. Among the various assurances and concessions granted to the oil companies, the following two are very important:—

(i) Rights of the oil companies regarding import of crude oil,

(ii) Pricing of the petroleum products on the basis of import parity.

7.6. The Oil companies have been given the freedom to make arrangements for importing crude oil from sources of supply of their own selection subject to the obligation to use under certain conditions crude oil produced in India. Assurance has been given to the companies for release of foreign exchange as required for the purpose of importing crude oil.

7.7. The oil companies have also been given assurance that they will be permitted to establish the prices of the products ex-refinery from time to time at any level not higher than landed cost on comparable products of import. There is further assurance that if any other refinery producing similar products from imported crude is granted terms generally more favourable than those granted to these refineries such terms will be made applicable to them also. The import parity prices of the products are determined by adding together the lowest f.o.b. quotations ex Abadan at the time (less discount), the ocean fright and marine insurance, with an allowance for ocean loss, and then by adding to the c.i.f. price, port and other landing charges and also the duty.

7.8. A knowledgeable person has expressed the following views about these conditions in the Refinery Agreements.

"Another stipulation that was made was that they would be allowed to bring in crude from their own sources. This is a very important consideration with the refinery companies. They are more or less subsidiaries of other big oil companies in the world. There are eight big international oil companies—one of them is the British Petroleum Company and another is the Royal Dutch Shell Company. This is partly owned by the Dutch and partly owned by the British. Another is a French Company. The rest of them, five, are all American Companies. These eight companies are very powerful. You will find them almost everywhere where there is a prospect of finding oil. Everywhere they have a subsidiary. And there is no competition among themselves. They are so interlocked with one another. For example, in India, there are three companies they are prepared to compete. But you cannot expect a free competition from them. One of the conditions, as I said, was that they will be allowed to import crude oil from their own sources. This was very important for them. Crude oil used to come from other countries but most of it is now produced in the Middle-East. Another condition which was stipulated was it was accepted by Government of India also—that the price for the products will be fixed at a level not higher than their imported value. The landed cost of the imported oil products at Bombay would be the determining factor. And it will not go above that. If in future, any other refinery which works on imported crude oil is given more liberal terms, the same will be made applicable to these companies. These are the three or four conditions against which the Government of India have to build up the petroleum industry in the public sector 80 per cent of the foreign trade in petroleum is in the hands of these eight companies in one form or another. The source of supply is from Middle-East. The crude oil that we get from there is cheaper than what we are getting from other sources. We are getting the crude from that source also. But, as it is a transaction betwen a company working there is a subsidiary to the parent company and the subsidiary of the same company in Bombay there is no price competition. They have to accept whatever prices are dictated to them. It is only through the vigilance of the Government of India that we have been able to get quite reasonable discounts."

7.9. Asked if at the time of sanctioning expansion in the capacities of the private sector refineries any efforts were made by Government to modify the terms of original agreement as regards import if crude, the Secretary of the Ministry stated during evidence:

> "....efforts to have the Agreements modified have been made for the last four or five years. But, we have not succeeded in getting these Agreements terminated. There are only two or three provisions in the Agreements which now require to be amended such as the right to bring crude from their own sources, the right to establish product prices on a import-parity basis. These are two major questions which, I think, ought to be modified in the public interest. Up till now, we have not succeeded though we have negotiated on quite a number of occasions."

7.10. Elucidating further, he stated:

> "We have agreed to let them operate on these capacities because, it was thought, that it would be in the country's interest to utilise this capacity. Now, having allowed them to run almost twice the amount of crude for four or five years, I think, whatever use we might have made of this situation, is no longer available. As a matter of fact, in 1963, 1964 and 1965, we did try as a result of the increased through-put, to get them to surrender or agree to modification of the Refinery Agreements. But, as I said, we did not succeed. To-day, I think, we will have to make use of some other fresh opportunity that might come on our way to negotiate for these modifications. ....They feel they have a card in their hands. Firstly they feel that the use of this capacity cannot be dispensed with by us at this juncture ....At one stage, they were willing to accept some changes in respect of the right to use certain types of crude from Government and so on. If I could hazard the guess, it was the decision of the Government in the first half of 1965 to stop all imports of products through the agencies of these companies that made them change their minds. In April-May, 1965 we decided that there should be no import of the deficit petroleum products by these companies. We said that the IOC will be the sole importer. We changed to import essentially from the Rupee source—the Soviet Union and so on. This meant a loss of almost 2 million tonnes of imports to these companies. It may be that this was a turning point because, uptill then, they were still negotiating with us."

7. 11. Analysing the situation further he stated:

"We have entered into agreements with them. We cannot abrogate them now; We can only change them by mutual agreement. At the time of the Chinese agreesion in 1962, there was need to make the fullest possible use of all available capacities in order to make the nation self-sufficient; then the Government decided to allow these refineries to go up to what they said was their capacity then. We have kept more or less to that since then. In 1962-63 they were allowed to run additional crude of 2½ million tons in one case and 3¾ million tons in another case. By doing so we avoided the import of finished products. The advantage to the country in terms of foreign exchange savings was considerable. Secondly, at that time, even in 1963, 1964 and 1965 the various new refineries which we had planned for in Cochin and Madras had not come into operation. Barauni and Gujarat were still not in operation. We were in need of petroleum products and the best way in which we could have met this demand was by making use of the available capacity inside the country in full. It was in this sense that this helped the country's interest. The alternative was, as Mr. Kashyap reminded me, to import these products. We are constantly on the look-out for an opportunity to modify the unsatisfactory provisions in the agreement."

7.12. Asked if the question of reduction in the price of crude imported by the oil companies was put to them, when the companies approached the Government regarding expansion of their capacities, the Secretary of the Ministry stated:

"Reduction in the price of crude has been our constant effort all the time....I have said that the question of price reduction has been tackled from time to time and constantly irrespective of the extent of crude that is run in this refinery. As a matter of fact the first crude price reduction came in 1961. Then, I think it was reduced again in 1964-65. There were three reductions....In 1963-64 we did negotiate... By then capacities had already been increased by the end of 1962. It was only later to alow the continuance of those capacities at those levels; and this gave us an opportunity to talk to them. They expressed the readiness to negotiate for the modification or change of the refinery agreements. In 1963-64 we did have long negotiations. Even there were some provisional drafts which were drawn up. But in 1965 certain things happened; I explained a little while ago that made these companies to go back on the understanding we had with them in regard to the modification of these agreements. In 1965 we had to stop all oil products to be imported through their sources. I have a feeling this is what made them suddenly drop the negotiations."

7.13. The Committee regret to observe that even though Government realise the need to modify the agreements with the oil refineries, particularly with regard to their right to import crude from their own sources, and the right to establish product prices on import parity basis, they have not yet been able to do so. The Committee are unable to understand why the Government did not avail themselves of the opportunity to modify the agreements when the oil companies approached them for permission to operate beyond their original licensed capacities from time to time. It is really surprising that the oil companies could go back from the understanding in regard to the modification of these agreements, particularly when viewed against the following background:

- **(i) the refineries expanded their capacities to over 100 per cent without obtaining any prior approval of Government which enables them to import larger quantities of crude,**
- **(ii) these expansions in the capacities have resulted in large scale coastal movements of petroleum products in foreign tankers involving substantial expenditure of foreign exchange on freight.**

7.14. A view can also be taken that the original agreements giving the coastal refineries the right to import crude from their own sources, should appropriately relate to the original capacities of these refineries. For the expanded capacity, it should be possible for Government to make the refineries agree to the imports of crude through Government at the best possible prices. This assumes importance in view of the continuing foreign exchange difficulties experienced by the country and the need to save as much free foreign exchange as possible. The Committee have no doubt that Government should be able to bring about suitable modifications in these agreements with the consent of the oil refineries. They hope that in the larger public interest Government will be able to negotiate the modification of the refinery agreements in respect of import of crude and fixation of prices of petroleum products on import parity.

B. Government control over the product pattern of the Oil Companies

7.15. It has been stated by the Government that the Ministry of Petroluem and Chemicals exercises close watch on the availability and the demand of petroluem products. This is done in meetings which are known as Supply Plan meetings held with the oil companies towards the end of each month. Among the many items discussed and finalised at these meetings is the production of the individual refineries in the ensuing month. In doing so, special note is taken not only of the anticipated level of the overall requirements, but also of the special needs of the regions served by the individual refineries. The oil companies, with their network of agents and distributors and with their market intelligence, normally table realistic production figures. It has been stated that the need for the Government to prevail upon the oil companies to increase or decrease the production of particular products, therefore does not ordinarily arise, except for the specific purpose of determining from month to month, the production of ATF and LDO, particularly the latter.

7.16. The demand for LDO is seasonal, being heaviest during the period October to February, when this fuel is used to run low speed engines for irrigating the Rabi crop. The demand is the heaviest in Gujarat, followed by Maharastra and Rajasthan. The Ministry determines the level of demand each month, in consultation with the State Governments. Thereafter, production and movement schedules for individual refineries and oil companies or prescribed and their implementation assured. Similar plans have to be made for the production and movement of ATF.

7.17. The agreements with the three foreign oil companies for establishment of private sector oil refineries stipulate, in identical terms, that the refining company may change the relative portion of the products manufactured at the respective refinery, provided that the output of the kerosenes as estimated in not substantially lowered thereby. This provision was made with the specific intention that the three refineries continue to produce this deficit item at an output which approximates to the designed one.

7.18. The three private sector refineries are stated to have followed this stipulation and presently producing quantities of kerosenes either in excess of or approximating the design yield, as shown by the following figures:

		Burmah-shell	ESSO	Caltex
Design percentage of kerosenes to crude through put.		12.75%	11.53%	15.2%
Actual production of	1964	21.84%	14.57%	18.36%
Kerosenes over crude	1965	18.55%	14.45%	17.1%
through put.	1966	16.13%	13.00%	12.67%

7.19. Asked to state the reasons why the foreign oil companies following the closure of the Suez Canal reduced production of fuel oil preventing the country from earning foreign exchange, the Secretary of the Ministry stated during evidence:

"It is true they have reduced the production of fuel oil. It is also true that this caused some difficulties in the country, especially in meeting the requirements of international bunkers. But, the I.O.C. and the Cochin Refinery were able to overcome most of the handicaps. The Cochin Refinery was able to increase its fuel oil production by 20,000 tons per month and the IOC was able to meet the needs....The IOC was able to help in maintaining the bunkering services in an adequate manner, as a result of the steps they took. I would like to emphasise one point here. The IOC was able to build up its position in the fuel oil business because of their changing the production pattern.

7.20. The Managing Director (Marketing Division) IOC stated in this connection:

"In the case of ESSO the fuel oil production came down to 15,000—18,000 tons per month after this change of production pattern and in the case of Burmah Shell the reduction was less—7,000 or 8,000 tons. When we were trying to enter, to crash our way in the fuel oil market, this reduction helped us very considerably to pick up additional trade in fuel oil. But for this, we would have had to give substantial rebates in order to establish a sizeable share of market; that would have cut into our profit margin. When this change took place, we were able to pick up this business without having to concede any substantial rebates. It would have taken quite a few years to capture this market but for this opportunity."

7.21. Asked why did these companies change their product pattern he stated.... "They wanted to produce more of the more profitable items like kerosene."

7.22. Asked why was it not considered desirable by the Government to exercise their powers to check such manoeuvres of the companies, the Secretary of the Ministry stated:

"At that point we could have exercised our statutory authority, directing them to do certain things. The question is whether we should have used that power then to meet our objectives. Under the Essential Supplies Act we could have given directions as to what they will produce etc. It is a matter of deciding when you should use the big stick. I think the decision is a decision which the Government has to make in consideration of all the factors."

7.23. It is unfortunate that the foreign oil companies reduced the production of fuel oil following the closure of Suez Canal which, as has been admitted, had caused some difficulties in the country, especially in meeting the requirements of the International Bunkers'. While the Committee appreciate the role of IOC which rose to the occasion in meeting the demand for fuel oil in the country, they feel that Government should not have allowed the oil companies to change their production pattern to suit their own business interests to the detriment of the Nation's. The Committee recommend that Government should not hesitate to use their powers regarding determination of the production pattern of the oil companies in the larger public interests in future.

C. Cochin Refinery

7.24. The Agreement for the formation of a new company known as 'Cochin Refineries Ltd.' was signed on the 27th April, 1963 between Government of India, Phillips Petroleum Co. U.S.A. and Duncan Brothers and Company, Calcutta. The authorised equity capital of company is approximately Rs. 15,00,00,000 comprising 1,500,000 equity shares of a value of Rs. 100/- each. The participation in the equity capital of the company is as follows:

Govt. of India	51
Phillips.	25%
Duncans	2%
State Govt.	7%
L.I.C.	7%
General Public	8%

(i) *Role of Duncan Bros Ltd.*

7.25. Asked about the reasons for giving 2 percent equity participation to M/s. Duncan Brothers, it was stated that they were responsible for bringing M/s. Phillips to the discussion table and were their associates during all these negotiations.

7.26. The Committee are surprised that M/s. Duncan Brothers were allowed 2 per cent equity participation simply because they brought M/s. Phillips to the negotiation table and were their associates during the negotiations.

(ii) *Increase in Capital Cost*

7.27. It has been stated that the original cost estimate of the Cochin Refinery was Rs. 19.85 crores with a foreign exchange content of about 10½ to Rs. 11 crores at the then rate of exchange. The present estimate is Rs. 27.70 crores with a foreign exchange content of Rs. 17 crores at the new rate of exchange. The reasons for the increase were stated to be devaluation and the cost of additional facilities provided. The following item-wise break-up of the increase in cost estimates has subsequently been furnished by the Government.

7.28. The main reasons constituting the increase in costs together with amounts involved are:

	Rs. *in lakhs*
(i) Land having to be paid for (against the assumption of a free gift from the State Govt.)	61.96
(ii) Cost (of shore-to-refinery pipeline due to the present site being eight miles away from the water front)	143.86
(iii) Cost of construction of a private railway siding of a total length of 8 miles (against less than ½ mile originally planned for)	115.57
(iv) Increase in Customs duty over the initial provi sion (additional payment)	201.53
(v) Additional shipping freight having to be incurred.	27.95
(vi) Interest payment on loans during construction having been more than provided for.	19.53
(vii) Effect due to devaluation of the rupee in that when the dollar loans are repaid there will be more outgo of rupees at the post-devaluation coversion rate.	467.00
(viii) Increase in size of key vessels in anticipation of future expansion needs	13.15
(ix) Various other factors	33.76
Total:	1084.31

7.29. It has been stated that the increase in cost has been due to many items which would not have been in existence, had the land originally been selected, been available. The initial estimates were prepared at a time when a site, different from the one where the refineries are now located was in view. Another major increase is due to devaluation which could not be foreseen earlier.

7.30. Illustrating that some of the above items could not be foreseen the representative of the Ministry stated during evidence "originally the land was to come as a free gift from the State Government but ultimately it had to be paid for and this cost Rs. 61.96 lakhs. Then the refinery site was changed to a place about 8 miles away costing Rs. 143 lakhs on laying of pipelines upto the water front."

7.31. The payment for land was stated to have been necessitated by a decision of the Government not to accept free gifts of land from the State Government and elaborating the same the Government have stated in a written reply that at one time, it was envisaged that the site will be given free of cost by the Kerala Government. From the past experience of such offers of free land for the refinery and other projects, the Government of India took the view that, for purely commercial projects, the acceptance of such a gift was neither expedient nor desirable. In the context of financial participation by the Governments of Assam and Bihar in the oil refineries at Gauhati and Barauni respectively, it was decided by the Chairman, Planning Commission that the said Government should be paid for the land inspite of their earlier assurance to make land available free of cost. On the same analogy, it was considered that it would not be correct to accept gift of land from the Kerala Government for the Cochin refinery.

7.32. The Committee regret to observe the steep increase in the cost estimates of the refinery from the original Rs. 19.85 crores to the anticipated Rs. 28 crores. They note that an increase of over Rs. 3 crores is directly attributable to the change in the site of the refinery necessitating, in addition to the payment for the land, payments of Rs. 143.86 lakhs for a pipeline from the shore to the Refinery and Rs. 115.57 lakhs for a private railway siding.

7.33. The Committee need hardly emphasise that the estimates of costs should be prepared after selection of site and should be more realistic.

(iii) *Technical Services fee for services outside India/in India.*

7.34. The construction work of the Cochin Refinery has been done on turn-key basis by Messrs Phillips Petroleum International

Corporation. Besides, the Phillips Company is to provide tecnnical services to the refinery for which they are to be paid fixed sums for a number of years. The details of these provisions are given below.

7.35 Under the Technical Services Agreement entered into by the Cochin Refineries Limited with M/s. Phillips Petroleum Co., the Company has requested Phillips to provide and Phillips has agreed to provide the technical services necessary for the operation of a refinery to be located at or near Cochin

7.36. Clause 3.3 of the above agreement providing for Technical Services Fee for services and research outside India reads as follows:

> "3.3. Technical Service Fee for Services and Research Outside India—for technical services, including technical achievements and experience and for further technical developments and research during the term of this agreement, conducted outside India all relating to refinery operations, the Company shall pay to Phillips a technical service free as follows:
>
> (a) 110,000 US dollars per quarter for the first five years from the date of commissioning of the refinery;
>
> (b) 100,000 U.S. Dollars per quarter for a further period of five years subsequent to the first five years period; and
>
> (c) 90,000 U.S. Dollars per quarter for the next five years subsequent to the period specified to (b) above. The first such sum shall be payable on the first day of the first calendar month after the commencement of commercial operations of the refinery and thereafter on the first day of each quarter year commencing after the initial payment.

7.37. Clause 3.4 providing for technical service fee for technical service in India reads as follows:

> (a) For the furnishing of technical service for the operation of the refinery in India, the Company shall pay to Phillips a fee of the rupee equivalent of 2½ US Cents per barrel for each barrel of crude oil which the refinery charges each month for a period of six years after the commencement of commercial operations.
>
> (b) After the expiry of the six year period indicated above, the fee shall be reduced to the rupee equivalent of 1½ U.S. Cents per barrel of crude oil charged for a further period of three years, and

(c) the amount of barrels upon which such fees are payable shall be the amount of barrels of crude oil actually charged at the refinery each month, but shall not average less than 40,000 barrels per day nor more than 55,000 barrels per day. After the expiry of the first nine years of commercial operations of the refinery, the amount of technical service fees payable to Phillips for services rendered by them in India shall be as may be determined by the Company and Phillips.

7.38. Payment of the technical service fees in India shall be made monthly within 30 days after the end of the month in which the crude oil was charged by the refinery after the commencement of commercial operations.

7.39. The amounts paid by Cochin Refineries Ltd. to Phillips Petroelum International Corporation from the start of its commercial production on 26th May, 1967 upto 31st December, 1967 under the above heads are stated to be as follows:

(*i*) For technical services fee on services and research outside India	$330,000 or Rs. 24·75 lakhs.
(*ii*) For technical services inside India.	Gross amount Rs. 21,12,367·58.
	—Less income tax deducted at source @70%
	Rs. 14,78,657·33.
Net paid.	Rs. 6,33,710·25
TOTAL . . .	Rs. 31·09 lakhs.

7.40. As per information furnished by the Government the Annual foreign exchange outgo on account of the above clauses of the contract will be as follows:

Year.	In India.	Outside
1	2	3
	(Rs. in lakhs)	($ in lakhs)
1967-68	32·63	4·4
1968-69 .	32·55	4·4
1969-70	32·55	4·4

1	3	2
1970-71	32·55	4·4
1971-72	32·70	4·3
1972-73	28·43	4·0
1973-74	16·28	4·0
1974-75	16·28	4·0
1975-76	12·23	4·0
1976-77		3·9
1977-78		3·6
1978-79		3·6
1979-80		3·6
1980-81	....	3·6
TOTAL	236·20	56·2

(about Rs. 4·2 crores).

(Income-tax at current rate of 70% is however deductable at source in respect of services inside India).

It has been stated that the payments made in rupees are also subject to conversion under foreign exchange regulations.

7.41. The Committee are deeply concerned about the foreign exchange outgo during the next fifteen years on account of technical services fee for services and research outside India amounting to about Rs. 4.2 crores. They also note that in addition to this, the payments received in rupees for services in India which would amount to about Rs. 2.36 crores during the nine years may also be converted into foreign currency and can be taken out of the country. The Committee feel that these payments together with the share of M/s. Phillips in the process margin of the refinery will result in a substantial foreign exchange drain,

(iv) *Supply of crude*

7.42. The relevant, clauses of the Agreement regarding supply of crude oil utilisation of Indian Flag Tankers, and utilisation of indigenous crude oil read as follows:

7.43. 10.1. Supply of Crude Oil. The New Company will purchase the crude Oil suitable for use in the refinery from imported or indigenous sources as may be determined. For a period of 15 years from commencement of commercial operations Phillips will act as the agent of the New Company, and will make arrangements for the purchase of imported crude oil on the best terms possible.

The quality and type of the crude oil, or blends of crude oils, shall be suitable for use in the refinery, as designed, to facilitate the production of the types and quality of products described in Appendix II. Phillips shall also act as agent of the New Company in making arrangements for chartering tankers to transport the imported crude oil and such of those products as may be exported from the refinery at the most advantageous rates available but at rates not exceeding prevailing INTASCALE rates.

7.44. 10.2. Utilisation of Indian Flag Tankers—If at the time tanker arrangements are made, Indian flag tankers are available, they will be engaged by Phillips/New Company provided the freight rates are competitive in relation to tankers chartered|hired on a long term basis in the world tanker market. Phillips|New Company will provide Director General of Shipping, Government of India data on requirements, requirement dates and physical dimension of tank ships required. Upon Director General of Shipping providing assurance that such tank ships will be made available, Phillips|New Company will enter into a long term charter agreement with each companies as are nominated by the Director General of Shipping for use of these tank ships. Rates will be those prevailing for such long term charters at the time of signing of this charter agreement and will be payable in U.S. dollars or Pound Sterling. If Indian tankers are not available initially, then Phillips authority shall be limited for a period of 5 years to charter foreign tankers.

7.45. 10.3. Utilisation of Indigenous Crude Oil. If at the time crude oil arrangements are made, indigenous crude oil is available it will be utilised by the New Company in preference to the imported crude oil provided such indigenous crude oil is available in sufficient quantities and suitable for use in the refinery. The imported crude oil contracts negotiated by Phillips shall provide for reductions in amount to accommodate the usage of Indian indigenous crude oil."

7.46. It has been stated that an agreement for the supply of crude to the Cochin Refinery for a period of 4 years has been entered into between Standard Oil Company of California (SOCAL) and Cochin Refineries Ltd. In terms of the contract, the crude oil shall be supplied during the first year of commercial operation of the said refinery, @35,000—55,000 bbls./day at buyer's option, and for later years

@ 50,000 bbls./day, 10 per cent more or less at buyer's option. The oil supplied shall be Light Iranian (Agha Jari) crude oil of 32.0—35.9 API gravity at 60.F. (which may be substituted, in case of its non-availability under certain specified conditions, by Stabilised Arabian crude of 34.0—34.9 gravity). The Agha Jari crude, presently being used by Cochin refinery, is to be supplied at price which is the lowest f.o.b. Persian Gulf price at which the same is available to either of the three private sector oil refineries in India (and which is taking the same at a rate of not less than 10,000 bbls/day on a continuing basis). This corresponds to $1.40 per barrel on the present posted price less discounts.

7.47. Under the tanker charter contract between Cochin Refineries Ltd. and M/s. Triton Shipping Inc., the ocean freight ex-Kharg Island to Cochin is 20.10 cents per barrel; this is cheaper than the freight charges paid up to Bombay by private sector refineries. The f.o.b. price plus the lower freight charges paid by the Cochin refinery are thus cheaper than similar costs paid by the other companies based on import parity. For Haldia refinery, the Government have contracted with M/s. Total International of Bermuda for supply of Light Iranian crude oil of 32.0—35.90. API gravity from Kharg Island at a f.o.b. price of $1:39 per barrel with possibility of further rebates as may be mutually agreed upon. Cochin refinery could also import crude at similar price, but for commitments in SOCAL contract whereby the price is linked, in the way mentioned above, to that obtained by private sector refineries. Assuming that Cochin refinery would operate at a level of 50,000 to 55,000 barrels/day, a lower price by every $0.01 from that quoted above would result in a saving of approximately $0.17—0.19 million per year to Cochin refinery.

7.48. It was stated during evidence that the crude was earlier being brought into India at 2 dollars and 2 cents and that M/s. Phillips offered to bring the crude at 1 Dollar and 94 cents. As regards the advantage from the clause the Secretary of the Ministry stated "At least the price of crude would not go up. Today's arrangement is valid for 3 years more and at the end of three years it is open to us to direct the Phillips to act in any particular manner in arranging for further imports......I think on the next occasion in 1970 when a fresh crude supply arrangement is likely to be made, I hope, the Cochin refineries will take steps to direct Phillips to act in a particular manner. The first crude contract which is valid for four years was negotiated by Phillips on their own and after the expiry of this contract we will tell them how exactly they will go about the business of making contracts on behalf of the Company".

7.49. He also added "uptil now they are bringing the crude at the same f.o.b. prices available from the Persian Gulf to others. We believe it is possible to get crude at cheaper rate".

7.50. Asked for the reasons for appointing a minority partner as an agent for the purchase of imported crude it was stated "this arises out of the statement by Phillips that they will produce crude at a delivery price not in excess of dollar 1.94 per barrel. They said if you give in the responsibility for arranging supplies we will ensure that the crude will be available at a price not in excess of it."

7.51. The question of M/s. Phillips acting as agent of the New Company in making arrangements for chartering tankers for the import of crude was also stated to be linked with their offer of supply of crude at 1 dollar 94 cents per barrel.

7.52. The Committee are unhappy about the present arrangements for the supply of crude to the Cochin refinery whereby a minority partner to the contract has been appointed agent for the purchase of imported crude. They feel concerned about the fact that while the Government believe that it is possible to get crude at a cheaper rate they cannot do anything in this matter till 1970, upto when the present contract for the supply of crude is stated to be binding, more so, when it is estimated that every reduction of $0.01 per barrel would mean a saving of about Rs. 13.5 lakhs to 15 lakhs in foreign exchange per year to this refinery.

7.53. The Committee, therefore, strongly impress upon the Government the need to make an alternate arrangement for the supply of crude as soon as the period of the present contract is over and also in the meanwhile to seek through negotiations on a reduction in the price of crude supplied to the Cochin refinery.

(v) *Process Margin*

7.54. Clauses 14.1 to 14.4 of the Agreement regarding process margin to be paid to the New Company read as follows.

7.55. "14.1. The New Company will process the crude oil delivered to it either from indigenous or imported sources. In processing such crude oils, the New Company shall have a margin of the rupee equivalent of 1·35 U.S. dollars per barrel of crude charged for the first 10 years of the commercial operations of the refinery based on the contemplated yield pattern and volumes contained in Appendix II attached hereto. The initial landed cost of the crude oil, per barrel, plus the process margin of the rupee equivalent of 1:35 U.S. dollars shall not exceed the average product prices ex-refinery as detailed in the Oil Price Enquiry Committee Report and in force on the date of this Agreement."

7.56. "14.2. After the first 10 years of the commercial operations of the refinery, the process margin shall be reduced from the rupee equivalent of 1·35 U.S. dollars per barrel to the rupee equivalent of 1·30 U.S. dollars per barrel for a period of 5 years.

7.57. "14.3. If during any year, the delivered price of crude oil, and the ex-refinery prices as determined by Government of India from time to time, are such that the process margin as actually achieved is not as great as 1·35 U.S. dollars or 1·30 U.S. dollars as may be applicable, the Government of India agrees to make such arrangements as may be necessary to guarantee the attainment of the minimum process margin having regard to the revenues to be realised by the refinery and on the basis of which the process margin of 1·35 U.S. dollars or 1·30 U.S. dollars has been specified."

7.58. "14.4. The Government of India will, however, make no payment if at the end of a financial year the total process margin from start up of operations of the refinery to the end of that financial year is in surplus. When at the end of any financial year, there is a surplus in the total process margin provided since the start of the refinery operations and there exists a net balance of payments by the Government of India to the New Company, the New Company will refund to the Government of India such surplus to the extent of the net balance of such payments. For this purpose, the New Company shall keep separate accounts of the surpluses and deficiencies in the process margin, financial yearwise, during the entire period of the Agreement."

7.59. It may be noticed from the above clauses that the process margin has been fixed in terms of foreign currency *viz.* Rupee equivalent of 1·35 U.S. Dollars per barrel. This will amount to a process margin of about Rs. 80 per tonne, post-devaluation.

7.60. Asked what was the basis for fixing such a high process margin for this refinery the Government have stated in a written reply that during the course of negotiations loading to the conclusion of the Formation Agreement, Phillips had been insistent upon a guaranteed processing fee which was initially desired to be dollar 1·90 per barrel. Subsequently the figure of dollar 1·35 per barrel was agreed upon. In arriving at this figure, the delivery cost of imported crude Dollar 1·94 per barrel and the then current ex-refinery prices based on import parity and a reasonable rate of return on investment had been taken into account.

7.61. As regards the effect of devaluation towards increasing this margin further the Government have stated that the devaluation has not materially affected the extent of process margin. The 58 per cent increase in rupee value of the Dollar in process margin has been offset by a similar increase in landed cost of products ex-Cochin refinery which are based on import parity. To the extent that there has been an adventitious gain to the refinery consequent upon devaluation, the increase in ex-refinery product prices being more than the increase in landed cost of imported crude, the Government have imposed an additional non-recoverable excise duty on the sale, ex-refinery, of the said refined products, to mop up the fortuitous gain.

7.62. Asked why was the same not fixed in terms of Indian currency, the Secretary of the Ministry stated "This is the way it is written. I gather that this was Phillips requirement to protect themselves against any possible devaluation". It has also been admitted by the Government that with a larger process margin though the profit of the shareholders—both the Indian and foreign—go up, it gets added to the costs of production. The Secretary of the Ministry also stated during evidence "We have no such provision in other agreements. This is a feature of this agreement alone" and added that the desire to reach an agreement prompted the Government to agree to this special provision.

7.63. Asked to clarify the guarantee of the process margin provided under cl. 14.3 of the agreement he stated "It means, if, for example, in a particular year 10 million barrels of crude have been processed, they should, at dollar 1·35 have a total margin of 13·5 million dollars. This is the gross revenue that they have to realise. If in a particular year they do not realise 13·5 million but realise only 13 million the Government have to take such steps as to meet the remaining half a million. We have to give subsidy or ask Indian Oil Corporation to do certain things. Indian Oil Corporation is Governments agents to dispose of the products of the company...... The revenue in the case of Cochin refinery is what they get in this manner irrespective of the other factors. If the expenditure side of it goes up the additional expenditure will have to be absorbed out of this 13·5 million dollars and so also the payment of debts, interest, maintaining charges, repairs etc."

7.64. Asked why did the Government agree to guarantee the minimum process Margin, he stated "This appeared fair and reasonable in April 1963 and it was necessary to accept this as a condition precedent to the agreement being made in April, 1963 at the then level of prices of crude oil, this Dollar 35 seemed fair and reasonable. Since then conditions have changed."

7.65. It has also been stated during evidence that there is no option to the Government to seek a change in the provision regarding process as is possible in the case of the contract for the supply of crude at the end of four year period. In this connection the Secretary of the Ministry stated "We are tied up and there is no escape from it."

7.66. An eminent person once connected with Petroleum Industry has expressed the following opinion before the Committee about this clause in the agreement relating to prices margin.

"......This margin is not obtainable by them even in their own country or by any refinery anywhere in the world."

7.67. The refining costs for this refinery are stated to have been budgetted at Rs. 55 per tonne for 1967-68 whereas the corresponding refining costs of the other public sector refineries at Gauhati, Barauni and Gujarat are Rs. 28:56, 42·70 and 26·21 respectively. The gross margin per tonne for the Cochin refinery is estimated to be Rs. 16·27 per tonne.

7.68. In the Book of Demand for Grants of the Ministry of Petroleum and Chemicals—1968-69 a provision of Rs. 56,51,000 has been included on Revised Estimates 1967-68 and Rs. 75 lakhs has been included in the Budget Estimates 1968-69 towards the payment to Cochin Refineries Ltd. on account of Process Margin.

The note on important schemes on p. 47 of the Book of Demand reads as follows:—

> "No provision was recommended for inclusion in the Budget Estimates 1967-68, as at the time of budget provision last year, it was thought proper to wait for the operational results of the refinery over a period of 12 months. The refinery was inaugurated in September 1966 but started its commercial production from 26th May, 1967. The Company closed its first year's accounts on 31st August, 1967. The Government have to make a provision to pay the shortfall in process margin to the Company. An amount of Rs. 56,51,000 has now been included on Revised Estimates 1967-68. to enable payment being made to C.R.L. of the said shortfall in process margin in respect of the period

from 26th May, 1967 to 31st August, 1967, during the current financial year. A provision of Rs. 75 lakhs has been included in Budget Estimates 1968-69 on account of estimated shortfall in process margin in respect of the period from 1st September, 1967 to 31st August, 1968."

7.69. The Committee consider the provision for the guaranteed process margin payable to Cochin refinery as a distinctly disadvantageous feature of the Agreement which cannot be justified by the "desire of the Government to reach an agreement." In their opinion the process margin which now works out to about Rs. 80 per ton (post devaluation) and was about Rs. 50 per ton even in 1963 (pre-devaluation) when the agreement was entered into, is very high. The Committee feel that such a high guaranteed process margin will act as a disincentive to the company to make any effort to economise and to reduce their refining costs. This is borne out by the fact that while the refining costs in Gauhati and Gujarat Refineries are below Rs. 30 per ton (which are also higher than those of the private sector refineries), the refining cost of the Cochin Refinery are stated to have been budgeted at Rs. 55 per ton during 1967-68. In fact payment to the tune of Rs. 56,51,000 has to be made to the Cochin Refineries Ltd. on account of the shortfall in process margin in respect of the period from 26th May, 1967 to 31st August, 1967 for 3 months only. Thus the refining costs of this refinery are already higher by 100 per cent compared to the other refineries. The Committee further regret to note that there is no option with the Government to seek any change regarding the provision for process margin as is possible in the case of the supply of crude to the refinery when in 1970 the contract for the same is to be renewed.

7.70. The Committee also do not appreciate the fact that the process margin has been indicated in terms of the currency of the country of the minority partner because of their insistence for the same.

7.71. The Committee, therefore, strongly urge the Government not to accept such unusual terms in their future contracts. Further there should be a provision in the contracts for periodical review of the terms so that the Government may have the option to modify the terms of a contract found to be disadvantageous subsequently. The Committee also recommend that all financial provisions in the contracts should invariably be expressed in Indian currency.

(vi) *Exports of Surplus Products*

7.72. Clause 8.2 of the agreement regarding export of surplus products reads as follows:

"8.2. Export of Surplus Products—Phillips undertakes and guarantees to export surplus products produced by the refinery on the best prices obtainable by Phillips on the world market. The New Company shall decide whether it desires to export the surplus products on the terms and conditions available. Phillips has markets in Australia for refined products and would give first preference to the surplus products of this Indian refinery."

7.73. During evidence the Secretary of the Ministry stated that M/s. Phillips had undertaken to obtain proposals for exports and submit them for consideration of the company and that the Board of Directors had not accepted in one or two cases the proposals made by M/s. Phillips as their prices were not satisfactory. He added "Guarantee to get the best price they can is really an abstruse sort of provision. In the cases in which they have given their proposals we have found that the prices they can obtain were not satisfactory. Our Indtan Oil Corporation has actually been able to export at better prices the surplus products of Cochin refinery than M/s. Phillips were able to offer......M/s. Phillips best offer were not good enough to us."

7.74. In a subsequent written reply the Government have stated that Phillips made certain offers before and subsequent to the start of the refinery which were found not acceptable to Cochin Refineries Ltd. or the Government either because the prices quoted for export were too low and not even competitive with those obtained by the local oil companies including Indian Oil Corporation, or the said offers were vague in their terms. After a series of discussions, it was agreed that Phillips would continue to endeavour to obtain the best prices for the export of products of Cochin refinery.

7.75. Surplus products of Cochin refinery were stated to have been exported by Indian Oil Corporation either by direct negotiations or through the agencies of State Trading Corporation. Such an arrangement the Government state, will continue, if this was in the larger interest of the project.

7.76. The Committee are not convinced of the usefulness of the clause 8.2. relating to exports in the contract which, as has been admitted by the Government, is of an abstruse nature. It also appears to the Committee that perhaps M/s. Phillips Petroleum have not made any genuine efforts to find a foreign market for the refinery's surplus products.

7.77. The Committee urge that Government should caught the clauses of such contracts in more definite terms. As regards the disposal of the surplus products of this refinery, the Committee are of

the opinion that the Cochin Refinery Limited should not bank upon the efforts of M/s. Phillips to find foreign markets and should continue to explore foreign markets for this refinery's surplus products through the agencies of IOC/STC.

(vii) *Advantages of the Agreement*

7.78. Asked what has been the benefit from this Agreement, the Secretary of the Ministry stated during evidence "It is really a foreign exchange benefit. Phillips helps to bring to us three or four million dollars of foreign exchange in equity. Besides they help by bringing 19 to 20 million dollars of loans for financing the refinery.. ....20 million dollars is Rs. 15 crores and 4 million dollars is Rs. 3 crores: total Rs. 18 crores."

7.79. The Committee have commented on the various clauses of this agreement viz. those relating to the import of crude, payments of technical fees to the foreign collaborators and payment of process margin. They feel that notwithstanding the foreign exchange that has been arranged by the foreign collaborators for this Refinery the agreement is disadvantageous from an overall point of view. In the opinion of the Committee Government have not been vigilant enough in weighing the advantages and disadvantages of the various clauses in this agreement. They would like that before entering into such agreements in future Government should scrutinise them very carefully.

D. Madras Refinery

7.80. The Agreement for the formation of the Madras Refineries Ltd. was signed on the 18th November, 1965 between the Government of India and National Iranian Oil Company and AMOCO India Incorporated of U.S.A.

7.81. The participation in the intial equity capital of the Refienery Company is as follows:

Government of India and such others as the Government of India may determine, including the State of Madras .	74%
National Iranian Oil Co	13%
Amoco	13%

7.82. As regards the Management of the Refinery Company, 2.5, 2.7 and 2.12 of the Agreement read as follows:

"2.5 A. The Board of Directors will be comprised of thirteen directors.

B. Nine of the said thirteen directors will be Government of India nominees who will be elected annually by the shareholders of the Refinery Company.

C. Four of said thirteen directors will be appointed by Amoco and NIOC, or their affiliates, so long as Amoco and/or NIOC or their affiliates have at least twenty-six per cent (26%) of the equity shares. During such time as NIOC and/or its affiliates holds thirteen per cent (13%) of the equity shares, NIOC shall appoint two of said directors, and likewise, during the time Amoco and/or its affiliates holds thirteen per cent (13%) of said shares, it shall appoint two or said directors. The directors appointed under this clause by NIOC or its affiliates and Amoco or its affiliates will not be liable to retire by rotation but will serve until replaced by the parties appointing them.

D. After the foreign exchange loans to be arranged by NIOC and Amoco (or their affiliates) have been fully repaid, the provisions of Sections 2.5B and 2.5C hereinabove shall cease to be effective and all of the thirteen directors will be elected by the shareholders of the Refinery Company according to the principle of proportional representation so that each shareholder will be entitled to as many votes as will equal the number of shares carrying voting rights held by such shareholder multiplied by the number of directors to be elected. Each shareholder may cast all his votes for a single candidate or distribute them among two or more of the candidates as he deems fit.

2.7. The Chairman of the Board of Directors will be nominated annually by the Government of India from among the directors of the Refinery Company.

2.12. The Managing Director of the Refinery Company will be appointed by the Board of Directors and will be the nominee of the Government of India. He will have such duties and authority as the Board of Directors will delegate. The initial terms of service of the Managing Director will be one year. He may be reappointed for a further period or periods."

7.83. As to the advantages of the agreement the Secretary of the Ministry stated during the evidence:

"The principal advantages of the Madras refinery agreement are that we are able to find the foreign finances for this refinery. We are able to mobilise foreign finances for a fertiliser plant and for other related developments. This agreement gave Government upto about 65 million dollars of foreign finance for a refinery, a fertiliser plant and certain chemical projects. That is the principal reason for having entered into this agreement. Secondly we were able to make an agreement for the supply of crude for this refinery on a long term basis, on terms which appear to be quite satisfactory."

7.84. The cost estimates of the refinery have been put at Rs. 45 crores plus or minus 5 per cent with a foreign exchange content of about Rs. 19 crores, corresponding to a foreign exchange content of the same amount for Cochin refinery out of a total of Rs. 29 crores.

7.85. Regarding the supply of crude to the refinery he stated that the crude will be received from the two foreign partners as that was a condition to the agreement. The price of crude is stated to be one dollar and 35 cents per barrel, with a condition that if they sell crude to somebody at a cheaper rate, they will have to sell at the same rate to this refinery also. It was also stated that there was no similarity between this Agreement and the Cochin Refinery Agreement.

(i) *Government's Role as Indian Partner*

7.86. Asked what was the reason for not associating Indian Oil Corporation with the Madras Refinery Agreement he stated that one of the conditions of the Agreement was that a separate company will have to be set up. Indian Oil Corporation could have been an Indian partner. But at that time it was thought that since the Government had given a large number of assurances or undertakings to the foreign partners, it was best that the Government became the Indian counterpart rather than the Indian Oil Corporation. Indian Oil Corporation is, however, stated to be responsible for selling the products of this refinery.

7.87. The Committee consider the Agreement for the setting up of the Madras Refinery as a definite improvement over the Agreement of the setting up of the Cochin Refinery inasmuch as the price and source of the supply of crude to this refinery has been fixed in definite terms and that the Managing Director of the New Company is a nominee of the Government of India in this case. They are also happy to note that the foreign exchange content of the cost

estimates of this project is also much less than that of Cochin Refinery.

7.88. The Committee are, however, unable to appreciate why the Indian Oil Corporation which is responsible for running three public sector refineries has not been the Indian partner to this Agreement. They are glad to note that Haldia refinery has now been entrusted to the Indian Oil Corporation. They hope that this trend will be continued in future.

(ii) *Role of Engineers India Ltd. in the Refinery*

7.89. Asked as to what extent the services of the Engineers India Ltd. are being utilised for the construction of the Madras refinery, it has been stated by the Government in a written reply that "In furtherance of the provisions of Section 3.2(c) of the Formation Agreement dated 18-11-65, bringing into existence Madras Refineries Ltd., the latter entered into a contract for engineering management services for construction of the Madras Refinery with M/s Engineers India Ltd. with a view to give the maximum scope possible for engineering design and engineering organisation.

7.90. The functions of E.I.L. in connection with the construction of the said refinery, are two-fold. It is the main contractor for preparation of designs, equipment procurement drawings, and specifications for construction of the off-side facilities. It is also responsible for professional, technical and administrative services necessary for preparation and completion of the engineering and design of these facilities, preparation of detailed schedules for the performance of the construction and continuing analysis of construction procedures and costs to obtain physically and economically efficient design and construction. The off-site facilities, mentioned above, include soil investigation, site improvement, crude oil transfer, storage tanks, etc., but not yard-piping and the electrical distribution system. In this sphere, E.I.L. are responsible for design engineering, and supervision over the construction of the said facilities. They are also responsible for the indigenous procurement of equipment for these facilities as well as for the process units and power plant of the refinery.

7.91. In this connection the Secretary of the Ministry stated during evidence that in designing the E.I.L. have no part except for deciding what is indigenous and what must be imported. He added that designing will be done by them for the first time at Haldia Refinery where they will be designing some of the process units of their own.

7.92. Asked when the Engineers India Ltd. could design for Haldia Refinery why could not they do so far Madras Refinery he stated "They have grown since those years in experience. We want to build E.I.L. as a self-reliant engineering company. Earlier E.I.L. was not in a position to take up design work. It had just been formed."

7.93. Asked why have the services of the Indian Engineers associated with the Russians in the designing of Koyali refinery not been utilised for Cochin and Madras Refineries, he stated:

> "I think the circumstances are entirely different. The Engineers did work and did gain some experience. And it is this experience that is in fact available in E.I.L. Many of our Engineers in E.I.L. are those who have worked with the Russians in the Gujarat Refinery. But, they could not get into Cochin Refinery because the circumstances were different. And they were not called upon to work as contractors or engineers or whatever it is. In any case, at Cochin E.I.L. did not exist. Some of these Indian engineers who worked with the Russians were still working for the Gujarat Refinery."

7.94. While the Committee appreciate that services of the Engineers India Limited have been utilised to some extent for the construction of the Madras refinery they are unhappy to note that services of these Indian Engineers who were associated with the Russians in the construction of Koyali Refinery had not been utilised for the construction of the Cochin Refinery because the circumstances there were stated to be 'different'. This may perhaps be due to the Cochin refinery having been constructed as a turn key job by M/s. Phillips. The Committee, however, hope that the Government will fully utilise indigenous know-how in all such future projects.

E. Haldia Refinery

7.95. The Government of India has entered into Agreements with France and Rumania on 29-9-67 and 13-10-67 respectively for the setting up of a refinery at Haldia. The work of implementation of the project has been entrusted to the Indian Oil Corporation Ltd., The agreements provide for the submission of detailed techno-economic studies and conclusion of a contract for technical assistance and the import of equipment/materials, cost thereof being met either by the credit from the French or Rumanian firms mentioned above.

7.96. The refinery will be designed initially to process 2.5 million tonnes of crude oil per annum. Apart from producing the conventional products such a motor spirit, kerosene oil and fuel oil, this refinery will be designed to produce also jute batching oil, asphalt, lubricating oils and L.P.G. The refinery is expected to be commissioned late in 1970.

7.97. Refinerring to the terms of the Agreements, the Secretary of the Ministry stated during evidence:

> "Haldia refinery is wholly Government-owned and there is no foreign investment. We are the whole masters. The French and the Rumanians gave us certain technical assistance in the design and engineering of these refineries and in the mater of procurement of equipments from abroad. French and Rumanian Governments have granted us certain credits for financing the services and supplies. In addition, we have an agreement with the French for a limited purchase of crude oil from their sources. 50% of our credit requirements in the first six years or so will be bought from the French."

7.98. Asked why was it necessary to commit for the purchase of 50% of the crude requirements for the refinery from France he stated "The reason for this is two fold. Firstly, their Government offers us credit for financing. Secondly, we have made this agreement on terms which we find are very advantageous to us....We are depending on foreign finances. Foreign finance has to come from the French Government or from the Rumanian Government."

7.99. Admitting that these foreign finances were tied up with certain conditions he stated "Some of these conditions are such that for example in certain engineering equipments we must buy the French equipments. After all, French credit is available subject to such limitations just as British or any other credit is subject to limitations of that nature. One of the conditions was that we will buy limited quantity of crude from French sources—50% of the refinery requirements are bought for the first five or six years. After five or six years, we are under no obligation to purchase from them. Afterwards we are free to buy from anywhere all the crude."

7.100. On the question of insistence by the collaborators for import of equipment from their own country be stated that there is a certain obligation on the part of the Government when they receive credits from a certain country but denied that under this agreement they have been compelled to import some of the equipment that was available indigenously.

7.101. As regards utilisation of the services of the Engineers India Limited the Committee have been informed during evidence that for the first time designing will be done by Indian Engineers for this refinery. It is understood that in the case of licensed processes one has to buy know-how from others. At Haldia refinery however there are certain unlicensed processes which Engineers India Ltd. are going to design.

7.102. The Government have also stated in a written reply that they hope to utilise the services of Engineers Ltd. to the fullest extent possible in the design, construction and erection of the Haldia Refinery.

7.103. The Committee are not happy to note that even in the case of Haldia Refinery which is stated to be 'a wholly Government owned refinery' the Government had to commit themselves for the import of crude from French sources for 50 per cent of the crude requirements of the refinery, as the French credit is tied with such a condition. The Committee hope that at the end of the five or six years as stipulated in the agreement the Government will be able to procure all the crude requirements of the refinery themselves.

7.104. The Committee are happy to note that the services of the Engineers India Ltd. will be utilised to the fullest extent possible in the design, construction and erection of this refinery and also that the work regarding implementation of this project has been entrusted to the Indian Oil Corporation.

VIII

DISTRIBUTION

8.1. The ultimate aim of all the arduous business of prospecting, drilling and refining oil is to serve the consumer. To reach him, oil has to be channelled through the systems of transportation and marketing which together make up one whole *i.e.* the distribution system.

8.2. The marketing companies transport petroleum products in bulk in initial stages because of the economies of scale and as the point of consumption is approached, his bulk is broken into small lots such as in the case of kerosene, requirements are in drums, tins etc., and for motor gasoline and high speed diesel consumers needs are satisfied through retail dispensing pumps. The bulk transport is in coastal tankers, by rail tank wagons, pipelines and road trucks and to a limited extent in river crafts. In India there are at present 4 major marketing companies *viz.* (i) I.O.C. (Marketing Division), (ii) Burmah Shell, (iii) ESSO and (iv) Caltex, which distribute petroleum products. These companies have port installations at important ports of India and company operated and agent operated depots throughout the country. The depots are built in a prescribed manner to satisfy the requirements of the Chief Inspector of Explosives. The Indian Railways carry the products from refineries to these depots in specially designed tank wagons.

8.3. Prior to 1960, the import and distribution of petroleum products in India was handled by the following six oil distributing companies:

(1) Burmah Shell

(2) S.V.O.C. (now ESSO)

(3) Caltex

(4) B.O.C. (I.T.) Ltd. (Now Assam Oil Company Ltd.)

(5) Western India Oil Distribution Company.

(6) Indo-Burma Petroleum Company.

A number of other companies were engaged in the distribution of lubricants and specialities. The operations of B.O.C. (I.T.) Ltd. were confined mainly to the Assam area. A.O.C. has now taken over from them.

A. Impact of IOC on the Marketing of Petroleum Products

8.4. The Indian Oil Company Ltd. was incorporated on 30-6-1959, as a wholly Government owned company to undertake the sale and distribution of petroleum products of the refineries in the public sector. It started its marketing operations in the year 1960 with the kerosene and H.S.D. imported from U.S.S.R. Indian Refineries Ltd. and the Indian Oil Company were merged into one organisation under the name of Indian Oil Corporation Ltd. with effect from 1-9-1964. The Marketing Division of the I.O.C. now distributes the products of its refineries at Gauhati, Barauni and Koyani (Gujarat) and also the products of the public sector Cochin refinery. It will in future handle the distribution of the products of the Madras and Haldia refineries, when these go on stream.

8.5. The Marketing Division has made rapid progress. There has been a substantial increase in its sales and market participation. The year-wise position is indicated below:

('000 tonnes)

Year	Total sales of petroleum prodcuts	Sales of IOC	IOC's% share
1960	7776	10	0·12
1961	8364	120	1·43
1962	9284	396	4·26
1963	9999	844	8·44
1964	11032	1349	12·23
1965	11868	2604	21·94
1966	12406	3824	30·82

8.6. The current sales of the IOC are stated to exceed those of any other oil company in India. Of the total petroleum products sold in the country in 1966-67 I.O.C's sales accounted for 32.5%. It has been stated that by the end of the Fourth Five Year Plan, the market participation by I.O.C. will be more than 50%.

8.7. In April 1965, it was decided to discontinue imports of kerosene and H.S.D. from free sources and to resort to imports from the USSR and Rumania. The foreign oil companies namely Burmah-Shell, Esso and Caltex, declined to handle the distribution of bulk petroleum products imported from these sources. Therefore, their distribution had to be undertaken by the IOC. The import of bulk refined petroleum products except Avgas are now being channelised only through the IOC, to the extent such imports are now necessary. In the case of Avgas also, imports are made, as far as possible, through the IOC.

8.8. The three major international oil companies namely Burmah Shell, Esso and Caltex have been in the oil distribution business for a long time. It is expected that they will continue to market the products of their refineries and such other quantities as they may secure from the IOC, from time to time. But the share of these three companies in the total oil sales in the country is expected to decrease progressively as the consumption increases. The IOC aims eventually to be able to sell all or practically all of its products availability.

8.9. The overall policy to be followed in respect of marketing of petroleum products, is stated to be on the following lines:

(a) Under the refinery agreements, Government are committed to allow the foreign owned marketing companies to distribute the products of their associated refineries; that commitment will be honoured, at the level of production permitted to each of those refineries.

(b) The Indian Oil Corporation should distribute progressively upto 100% through its own organisation, the refined products of each new public sector refinery as it comes into production. Such distribution does not rule out product exchange arrangements with the other oil companies in the interests of orderly transfer taken.

(c) The Indian Oil Corporation should distribute all the deficit products that are imported on 'rupee' payment.

8.10. During evidence the Secretary of the Ministry stated the objectives of the IOC to be as under:

"The first objective was to help distribute the products of the Government refineries. Second was to help meet to the maximum possible extent the oil requirements of the Government Departments and public enterprises. Third was, by these means and otherwise by taking some of the private business to reduce the repaitriable profit of the private oil companies. And the fourth was, in certain areas of sensitive supply, like the border roads, certain air fields, to take over strategic supply service. These have been the major objectives of the IOC".

He also stated:

"They are trying to do business as a business proposition. They are also trying to serve a public purpose in the sense they are going into more difficult areas of operation, going into more difficult areas and less remunerative areas of operation, where the private oil companies are not interested to supply, and where there is a vacuum of supply. When in 1965 the private oil companies' imports of products was stopped and that created a certain artificial shortage in the distribution of kerosene, high speed diesel etc. it was the IOC which devised various means to meet the shortage."

8.11. The Indian Oil Corporation is stated to be serving the needs of all the public sector undertakings increasingly. On an average 60% of the needs of the public sector undertakings are stated to be met by the Indian Oil Corporation. Indian Oil Corporation is expected to increase its share in the business as more products become available.

8.12. It is also undesrstood that the policy of the Government regarding marketing of the private sector refineries is to allow the private companies to market their products.

8.13. In a written note subsequently furnished by the Government regarding the role of the Indian Oil Corporation it has been stated, "As a result of Indian Oil Corporation entering the marketing field, all consumers have felt the benefits of keener competition, resulting generally in better service. The country's dependence on foreign oil companies in the vital field of storage, distribution and marketing of essential petroleum supplies has been reduced.

8.14. By arranging for the bulk of the imports from rupee payment countries, Indian Oil Corporation has saved the drain of free foreign exchange to the tune of several crores. But for Indian Oil Corporation's well developed marketing facilities, these imports would have been impossible, as other oil companies refused to handle such products.

8.15. Besides the concrete gains listed above, several desirable social and national objectives have also been achieved. Indian Oil Corporation is a national undertaking; its profits go to the general exchequer and are used for the public good. Besides, Indian Oil Corporation serves remote areas and customers in out of the way places, even if it is not strictly profitable; for example, border areas like Gangtok and other places in the Himalayas and customers like the D.G.B.R. are served by Indian Oil Corporation in the larger interests of the country. Indian Oil Corporation also helps in rehabilitating ex-service men by appointing them as dealers and agents, wherever possible, consistent with commercial considerations."

8.16. The Committee are glad at the emergence of IOC (Marketing Division) as a major distributor of petroleum products in the country. Apart from undertaking distribution of petroleum products in difficult and sensitive areas of the country, it has helped in reducing the repatriable profits of the foreign oil distribution companies. Since the IOC has to market all the products of the public sector refineries and most of the imported petroleum products, it is necessary that advance plans are made to gear up the IOC to undertake its responsibility of handling additional products of the public sector refineries in future years. The Committee note that by the end of 1970-71 the refining capacity in the public sector is likely to be of the order of 13-14 million tonnes. Compared to its present operations amounting to about 4 million tonnes of petroleum products in 1966-67 the IOC would have to be geared to handle about 300 per cent more petroleum products within the next 3-4 years. The Committee would therefore like the Government to ensure that the IOC is enabled to handle all the petroleum products of public sector refineries in future smoothly and efficiently.

8.17. The Committee are unhappy that IOC—the biggest marketing unit for the petroleum products, has not been effective in bringing about a reduction in the prices of petroleum products because of the 'import parity' basis of pricing. While reiterating the need for a change in the present pricing policy, the Committee would like the prices of petroleum products to be made cheaper to the consumers by effecting economy in the marketing and distribution expenses of the marketing companies.

B. Supply Areas

8.18. As already stated there are at present eight economic supply areas for the whole country based on ports: Kandla, Okha, Bombay, Goa, Cochin, Madras, Vishakhapatnam and Calcutta which are the cheapest sources of the products for the area concerned, whether imported or received from coastal refineries under import parity.

8.19. The Government have, however, stated in a written note that no clear cut physical division of the country into different supply/marketing areas has been made. There is an identifiable area as being the area served by a particular port of import. During the days when petroleum products were wholly imported, a certain pattern of pricing in an area adjacent to the port of import evolved. Thus, in such an area, at the actual point of sale, freight as from the nearest port was added. A line of equalisation of freights as between two ports of import evolves itself and a supply/marketing area thus gets defined. This practice was in vogue before Government took control of the pricing of petroleum products. The two committees appointed by the Government to advise on pricing questions accepted what was already in force. No revision has been made in regard to the demarcation of these areas and no redistribution of these areas is at present envisaged.

It has also been stated that so long as import parity remains the main basis for pricing petroleum products in India, the calculation of freight from a port to any place within the economic supply area served by that port seems inevitable.

8.20. As regards the effects of such a division of the country on the producers, distributors and consumers, the Government have stated that this arrangement has no effect, adverse or beneficial, on refineries. The coastal refineries get the ex-refinery price equal to the landed port price. The inland refineries also get ex-refinery prices equivalent to the import parity price at the nearest port. So far as the distributing companies are concerned, they are reimbursed the actual freight involved if the distribution is within the supply area served by the port concerned. Under-recoveries in freight are, however, suffered on account of coastal or out-of-zone movements dictated by market requirements. In the case of supplies from inland refineries there are over-recoveries on sales in the vicinity of refineries and on sales within the area when the actual freight incurred is lower than the notional freight calculated from the nearest port. On movements to other supply areas, there are under-recoveries of freight.

8.21. Consumers in the port towns get petroleum products at a cheaper price than inland consumers. But the marketing companies have to absorb certain under-recoveries of freight on out of zone movements. Therefore, the concept of zones of supply served from different supply points, serves the interests of consumers to some extent.

8.22. Referring to this division of the country into different supply areas the Secretary of the Ministry stated during evidence:

> "It is not a question of geography but really of arithmetic. Distribution zones are so made as to produce a continuous variation in prices. There can't be sudden brakes so that on this side of a line there is a certain price ruling

and on the other side a completely disparate price. It is not a matter of geography. It is a question of how prices are built up. That is, starting from certain base points and how they progress with the movement of transport costs added on. Therefore the scope for rationalising distribution zones does not arise. They settle themselves."

8.23. Asked if the Government were considering any redistribution of the supply areas he stated that the present arrangement was there because of certain requirements of the refinery agreements. These agreements provide for the necessity for import parity as the basis for pricing and unless these agreements are modified there is no scope for departing from import parity principle.

8.24. When it was pointed out that because of this system a person at Barauni was paying more price for a product at the doorstep of the refinery than one at Calcutta he stated "the alternative is to make the man at Calcutta pay more."

8.25. **The Committee note that no revision has been made of the various supply areas which were settled when petroleum products were wholly imported. It is surprising that the Government do not envisage any redistribution of these areas as according to them, the present arrangement was there because of certain requirements of the refinery agreements. The Committee feel that the position as regards the indigenous availability of petroleum products has totally changed in the last decade with the setting up of public sector refineries and the country is now self-sufficient in petroleum products except for kerosene, lubricants and Aviation Turbine Fuel (A.T.F.). It is time that the benefit of the location of the inland refineries should be felt by the consumers in the adjacent areas also. The Committee, therefore, strongly emphasise that these supply areas should be redemarcated taking into account the location of the refineries and the need to make the products cheaper to the inland areas. The existence of the agreements with the coastal refineries should not be allowed to perpetuate the anomalies inherent in the present system.**

C. Kerosene Quotas

8.26. The Committee are informed that State-wise quotas have been fixed by the Government for kerosene. According to them in the case of kerosene, it was noticed that when shortages developed, the oil companies were reluctant to move supplies to certain areas. To ensure a more equitable distribution of available supplies, it was decided to fix company-wise monthly quotas of kerosene for each

State, except for Assam, Manipur, Tripura and Nagaland. The requirements of kerosene of Assam area are met in full by the production of the refineries at Digboi and Gauhati. An examination of the past consumption trends revealed that the *per capita* consumption of kerosene differed from State to State. Quotas for each State were fixed on the basis of consumption in 1964 when there were no shortages and the product was freely available. Supplies are made available to the States through the normal channels and control on distribution is exercised by the State authorities.

8.27. The following statement furnished by the Government shows the State-wise monthly allocation of kerosene, during 1966, 1967 and the corresponding upliftments by the States, which is stated to be below the monthly quotas in most of the States:

Name of State	1966 (March to December)		1967 (upto August)	
	Quota fixed	Supplies	Quota fixed	Supplies
Andhra Pradesh .	13,933	15,021	15,210	15,785
Bihar	13,900	12,226	15,500	12,791
Bengal .	22,870	17,942	23,400	19,152
Delhi. . .	3,700	2,885	3,500	2,918
Jammu & Kashmir	825	850	1,187	853
Goa. .	910	732	1,000	878
Gujarat	16,550	17,372	18,500	16,642
Kerala	8,800	7,842	9,600	8,386
Madras. .	21,340	19,232	21,430	20,709
Madhya Pradesh.	10,260	9,448	11,900	7,945
Maharashtra	42,950	41,005	44,700	40,639
Orissa. .	4,885	4,431	5,750	5,383
Punjab	10,222	9,019	12,040	7,039
Rajasthan . .	5,850	4,962	6,300	4,936
Uttar Pradesh.	18,800	16,827	21,300	18,259
Mysore. . .	10,050	9,207	11,200	10,577

It will be noticed from this statement that quotas allocated to States like Madhya Pradesh, Uttar Pradesh and Bihar were much less than that in the case of Maharashtra, Madras and West Bengal. Asked if in view of such disparities in quotas as well as lower upliftment in case of the certain States, the Government have thought of undertaking a revision of these quotas on a more rational basis the Secretary of the Ministry stated during evidence "We are proposing to revise it. There is enough kerosene, on the other hand there is not enough demand in some areas. In a number of cases the States are not able to take quotas allotted to them."

8.28. Referring to the faulty distribution he stated:

> "In the matter of kerosene distribution, there are statutory powers available to the State Governments and we have repeatedly requested them to use their influence and authority to correct the malpractices and deficiencies, if any, to the extent we work through the IOC, we have tried to make good some of these deficiencies....A time will come when we may not have to fix quota at all.... In the matter of kerosene distribution we have relied on the State Governments. It is the collectors who distribute the quota. We have always believed that the man on the spot is the right person to exercise the control. From Delhi it is impossible for us to exercise any control. If there is adulteration it is for the State Government to take vigorous steps to stop this."

8.29. Asked if it would be possible to have Oil Advisory Committee at the district levels, it was stated that in certain States there are such advisory committee advising the collectors but this was a matter which essentially rested with the State Governments.

8.30. The following statement subsequently furnished by the Government shows the State-wise monthly allocation of quotas as initially fixed from 1st March 1966, with subsequent revisions thereto.

State.	Quota-population basis	Quota as 75% past consumption and 25% population	Quota fixed on 1-3-66	Subsequent increase permitted upto 1-8-66	Allotment as from 1-10-66
Bihar	21,252	14,688	12,500	13,500	15,500
West Bengal	15,908	21,227	20,500	23,000	23,400
Andhra Pradesh	16,390	13,548	12,600	13,600	15,100
Mysore	10,743	9,586	9,200	9,700	11,200
Orissa	7,993	4,398	3,200	5,000	5,750
Madhya Pradesh.	14,745	10,711	9,100	9,000	11,900
Kerala	7,705	8,001	8,100	8,600	9,600
Madras*	15,514	19,029	20,200	20,200	21,700
Uttar Pradesh	33,592	21,298	16,700	18,200	21,300
Rajasthan	9,181	6,270	5,300	5,800	6,300
Punjab**	9,249	9.845	8,642	10,042	10,542
Himachal Pradesh	615	274	158	158	200
Gujarat	9,424	13,681	15,100	16,050	18 550
Maharashtra	18,017	36,154	42,200	42,200	44,700
Delhi	1,211	2,828	5,500	3,500	3,500
Goa	286	597	700	1,000	1,000
Jammu & Kashmir	1,622	921	600	800	1,050
TOTAL	..	..	190,300	201,250	221,292

*Including pondicherry.

**Punjab
Haryana
Chandigarh
Himachal Pradesh

@Including Daman, Diu, Dadra etc.

8.31. Asked to indicate the improvements carried out by this revision of kerosene quotas the Government have stated in a written note that when these allocations were fixed, some of the State Governments represented for larger allocations on the basis of population. In considering their representations, it was felt that the consumption of kerosene had a direct correlation with the availability of other fuels. This was also borne out by the actual consumption trends during the year 1964, when kerosene was freely available all over the country. In that year, the States with an abundant supply of coal and timber, showed a marked preference for these fuels. On the other hand, areas located away from the coal fields, consumed large quantities of kerosene. It was, therefore, not possible to reallocate the State kerosene quotas on the basis of population. However, in deference to the wishes of the State Governments, it was decided that as far as possible weightage will be given to the extent of 75 per cent on past consumption trends, and to the extent of 25 per cent on population of the individual States.

8.32. The initial State-wise kerosene allocations were 190,300 tonnes. These were based on the kerosene availability at that time Progressively as the availability improved, the allocations were also increased as under:

(a) By 10,950 tonnes between March and July 1966.

(b) By 20,042 tonnes effective from 1st October, 1966.

8.33. As regards further revision of the quotas the Government have stated "it has not been possible to make any further revisions in the State-wise kerosene allocations owing to difficulties in maintaining the anticipated rate of kerosene imports from the U.S.S.R. following the Suez crisis. Since the last revision was made on 1st October, 1966, the need for a further revision is recognised. It is proposed to undertake this revision effective from May or June, 1968 by which time it is expected that the Barauni refinery will stabilise its production at 2 million tonnes per annum and the Koyali refinery would commission its 3rd million tonne unit. In considering possible increases in the kerosene allocations, full consideration will be given to the actual consumption during the year 1967 when kerosene, though subjected to State-wise quotas, for purposes of ensuring adequate availability, was generally freely available. The actual consumption trends in 1967 are, therefore likely to be indicative of the amtual needs of the various States."

8.34. The Committee note that there has not been any revision in the kerosene quotas for the States since 1st October, 1966 and that the same is proposed to be undertaken in May or June, 1968. From the quotas allotted to the various States in October, 1966, the Committee note that there are wide disparities between the various States. The allotment to the coastal States, particularly to Maharashtra, West Bengal, Madras are much higher than to the more populous upcountry States or that warranted on their population basis. In the opinion of the Committee this may partly be due to the present system of supply areas and import parity pricing. Since kerosene is an essential commodity for the common man whether in the villages or the cities, the Committee strongly urge the Government to suitably revise the kerosene quotas of the various States with particular reference to the population factor so that no hardship is experienced by the common man in the interior which is normally the case now.

8.35. The Committee note that distribution of kerosene is primarily the responsibility of the State Governments. Nevertheless it is the duty of the distributing companies to ensure that there are no malpractices in the distribution of this commodity by their agents. The Committee urge that the Government, in consultation with the State Governments, should ensure that no inconvenience is felt by the people even in the remotest areas of the country in getting their supplies of kerosene which is an essential commodity of daily use.

D. **Regulation of retail outlets for distribution**

8.36. The question of growth of retail outlets had been under Government's consideration for quite some time. On 9th June, 1966 the Government appointed a Retail Outlets Committee with Shri R. R. Morarka as Chairman "to study the growth of retail outlets in the country in the past and to report on the desirability and methods of regulating future growth", with the following terms of reference:

"The Committee will—

(a) make a factual study of the growth of retail outlets in the last ten years and of the volume of average sales per outlet, a comparison with the position in other countries and an assessment of the justification for and consequences of the increases that have taken place shall be made;

(b) in the light of (a) above, report on the need for the methods of regulating the growth of retail outlets in the future with reference:

(i) the position in and the needs of the urban and rural areas separately, and

(ii) the expected growth of total business in the country and company-wise; and the criteria to be adopted in any such regulations;

(c) consider the desirability and feasibility of inter-company accommodation and/or adjustment in existing outlets.

8.37. The Retail Outlets Committee submitted their Report on the 14th November, 1967. In reply to a question the Minister of State in the Ministry of Petroleum and Chemicals has stated in Lok Sabha on 11th March, 1968 that the Government have decided to accept and adopt all the recommendations made by the Retail Outlets Committee.

8.38. From the copy of the above Report furnished by the Government, it is seen that this committee had conducted their studies with reference to the following regional grouping of the country:

Group 'A': The 4 metropolitan cities

Group 'B': The 26 selected towns as under:

1. Agra	14. Jamshedpur
2. Ahmedabad	15. Kanpur
3. Allahabad	16. Lucknow
4. Amritsar	17. Madurai
5. Bangalore	18. Mysore
6. Baroda	19. Nagpur
7. Cochin-Ernakulam	20. Patna
8. Coimbatore	21. Poona
9. Gwalior	22. Sholapur
10. Hyderabad-Secunderabad	23. Srinagar
11. Indore	24. Tiruchirapalli
12. Jabalpur	25. Trivandrum
13. Jaipur	26. Varanasi

Group 'C' : The rest of the area: and
Group 'D': All India.

8.39. It is observed from their report that the Government and the Indian Oil Corporation consider it necessary to regulate the future growth of retail outlets in the country with a view to achieving the following objectives:

(a) To progressively bring about a more equitable relationship between the product availability with the individual oil companies and their access to the retail trade.

(b) To channelise investments on retail outlets in the more purposeful manner.

(c) To improve the throughputs of the retail outlets.

(d) To encourage setting up of retail outlets, in the new areas which are not developing.

(e) To reduce costs and contain prices.

8.40. It is also understood that the Indian Oil Corporation feel that if a more equitable relationship between the product availability with the individual oil companies and their access to the retail trade is not brought about quickly enough, the foreign oil companies would retail motor spirit and high speed diesel processed in Indian Oil Corporation's refineries through their own (foreign oil companies) retail outlets and this will increase the foreign exchange liability of the country by way of repatriable profits.

8.41. The Retail Outlets Committee are also of the opinion that orderly growth of retail outlets in accordance with agreed principle is a desirable step as it would contribute towards the conservation of scarce resources. The Retail Outlets Committee has recommended certain targets for progressive improvements in the throughputs of the outlets and on the assumption that it would materialise. They have recommended 3063 additional outlets for the period 1968 to 1972 on an average increase of 612 outlets per year.

8.42. The Retail Outlets Committee are of the view that the situation in which Indian Oil Corporation finds itself, where it is not adequately represented in retail trade in relation to its product availability, requires some special consideration for the establishment of new retail facilities, without disturbing the existing channel of distribution, dealership, etc. To achieve this end, the private oil companies should exercise voluntary restraint in a large measure in the matter of setting up new retail outlets during the next five years i.e. from 1st January, 1958 to 31st December, 1972, to enable the Indian Oil Corporation achieve a faster growth rate. They feel that this can be achieved by the industry installing and commissioning the new outlets in this five year period, as under:

	IOC. (95%)	Other Oil Companies (5%)	Total (100%)
4 Metropolitan cities and the 26 selected towns	465	24	489
Rest of the area .	2435	139	2574
Total for 5 years .	2900	163	3063
Average per year .	580	32	612

8.43. In respect of retail outlets of the private oil companies on public land in the urban area covered by the 4 metropolitan cities, the 26 selected towns (excluding retail outlets on public land in the metropolitan area of Delhi and on land belonging to Port Trusts), and the 4 towns with a population of 2.5 lakhs and above, *i.e.* Bareilly, Jullundur, Meerut and Surat, they have recommended that the private oil companies should follow the procedure prescribed by the committee for an orderly transfer of the retail outlets to the Indian Oil Corporation and to develop alternative sites in lieu of outlets taken over by the Indian Oil Corporation.

8.44. They have also observed that a retail outlet may not be sustainable in the rural areas from the commercial point of view of the oil companies as well as the dealer while on the other hand, it is necessary to take essential petroleum products into the rural area to support the large expansion plans for intensive cultivation, lift irrigation, etc.

8.45. And for this purpose they have commended the proposal of one of the State Governments for organising farmers cooperatives to operate retail outlets or consumer pumps with the full cooperation of the Indian Oil Corporation. They have felt that where it is not possible for the local authorities to organise such cooperative societies, the Indian Oil Corporation as a public sector undertaking should set up such outlets or arrange for packed supplies to be stored in the interior hinterland for sale to farmers.

8.46. As regards methods followed by the Indian Oil Corporation at present for selection of individuals, cooperatives etc. for the opening of retail outlets the Government have furnished the following written information.

8.47. "On receipt of applications the parties are interviewed by the area Sales Officer and he reports to the District Manager the suitability or otherwise of the applicants. The applicants found suitable are subsequently interviewed by the District Manager. Names of suitable parties are then forwarded to the Branch where a selection committee comprising Branch Manager, Branch Sales Manager, Manager (Retail) and District Manager finally decides on the most suitable applicants. For sites in the metropolitan cities and for the company owned sites, approval of head office is also taken. Criteria for selection of such dealers are:

(i) The financial capability so that he has the capacity to extend credit.

(ii) Experience in running retail outlet.

(iii) Experience in similar trade such as marketing of tyres, batteries, accessories or transport business.

(iv) Business prestige and reputation in the market.

(v) Ability to organise and run the station giving courteous and efficient service to the consumers.

Other things being equal, preference is given to those parties who:

(i) will operate as working dealers rather than absentee dealers operating through paid Managers/employees,

(ii) will be fleet owners/transporters (i.e. owners of trucks/taxis/cars) or should have business relations with transporters or should be operating automobile workshops or should be in the business of TBA items, or the like.

(iii) are cooperative societies or to ex-servicemen of requisite qualifications if they are available."

8.48. Asked about the concentration of outlets in the hands of certain parties the Managing Director (Marketing Division) of Indian Oil Corporation stated during evidence:

"We avoid creating empires in the form of agencies and dealers. There had been one or two big parties who were with the foreign oil companies and soon after the inception of IOC these big parties switched over to us. They were very powerful. They had finance; trade connections, organisations, lorries, tankers and so on and over-night they switched over to us from the foreign oil companies. We do not create agencies except those who were with foreign oil companies and who switched over to us. We appoint dealers from town to town; from village to village.. IOC had to give agencies to parties who could invest money, credit and had facilities and so on. But in future we may try and split up these agencies."

8.49. The Committee are happy to note the views of the Government regarding the necessity for regulation of retail outlets for petroleum products. The Committee fully agree with the view of the Retail Outlets Committee that a more equitable relationship between the product availability with the individual oil companies and their access to the retail outlets is to be brought about for decreasing the sales of Indian Oil Corporation's products through the retail outlets of the foreign oil companies which adds to the amounts of profits repatriated by these oil companies. The Committee are happy that Government have decided to accept and adopt all the recommendations made by the Retail Outlets Committee. They hope that Government will take immediate action towards implementation of the recommendations of the Retail Outlets Committee.

8.50. The Committee would also like the Government to take early measures for splitting up of the agencies where there is a concentration of outlets in their hands, as that would lead to better service to the consumers and a lesser possibility of creating artificial local shortage of essential products like kerosene.

8.51. As regards distribution of products in the interior and remote areas, the Committee suggest that the Government should render all possible help to encourage the farmers' cooperatives to undertake operation of retail outlets, as the investments involved in a retail outlet are beyond the reach of a common man in the rural areas.

IX

REMITTANCES

A. Remittances by Oil Companies

(i) Remittances on account of payment towards overseas offices

9.1. The Oil Prices Enquiry Committee (July 1961) had observed that S.V.O.C. (now ESSO) paid in foreign exchange in 1958 and 1959 approximately Rs. 28·36 lakhs and Rs. 29·67 lakhs to their New York Office and Rs. 64,000 during each of the above two years to their London Office towards service rendered in obtaining supplies of crude and products and other incidental assistance. The Commitee saw no justification for payment of such charges as Caltex had not been paying such charges at all to Caltex Trading and Transport Limited on similar purchases or products through it. They also considered the amounts paid to S.V.O.C., New York as exhorbitant and recommended that the company should endeavour to reduce (and eventually eliminate altogether) payments on this account.

9.2. The Working Group on Oil Prices in their Report (1965) have observed that the total amounts paid in dollar/sterling by the different companies during the five years from 1960 to 1964 towards the cost of their New York/London offices were as follows:—

(Rs. million)

Year	ESSO	Burmah Shell	A.O.C.	B.O.C. (I.T.)	Total
1960 .	3·780	3·870	3·339	0·460	11·449
1961 .	3·690	4·383	3·339	0·446	11·858
1962 .	3·330	3·830	1·469	0·668	9·297
1963 .	3·760	3·659	1·469	0·334	9·232
1964 .	4·100	4·364	1·736	0·534	10·734

9.3. The payments in question were said to be made by the companies to meet their share of the cost of their overseas offices towards programming and procurement of supplies, provision of training facilities and technical and economic advice received. The increase in expenses has been attributed to general increase in costs.

One of the companies had also partly attributed the increase to progressive Indianization of their staff over the last few years, necessitating more frequent consultation with Head Office experts. The WGOP however, after due consideration, urged the companies to endeavour their utmost to reduce substantially expenditure under this head.

9.4. In a written note submitted by the Ministry the Committee have been informed that the Ministry is in correspondence with the foreign companies for reduction in their share of the cost of their overseas offices in London and New York, and that some discussions on the subject have also been held with their local representatives. As a result of the pressure exercised on them, there has been decrease in expenditure under these heads, in 1966 compared to 1965, as shown below:

Year	ESSO	Burmah Shell	AOC/BOC (IT)	Caltex	Total
	£	£	£	£	£
1965 . .	284,926	405,146	180,000	18,579	888,651
1966 . .	261,826	352,916	135,000	16,363	766,105
				Difference	122,546

9.5. It has been added that the matter is under constant review and further reduction is expected in 1967 and the subsequent years. It has been stated that the expenditure under these heads cover technical and engineering fees, royalties, license fees and the appropriate amount of the head office expenses. The agreements concluded by Government in 1951 with ESSO and Burman Shell and in 1953 with Caltex for the establishment of the refineries at Bombay and Visakhapatnam contain the assurance that Government will make available foreign exchange to cover the aforesaid expenses. Similar payments for one or more of the aforesaid category of services are also being made in varying amounts by the associated marketing companies. The progress of negotiations for further reduction in these expenses with each of these companies is indicated below:—

ESSO

The matter has been recently discussed by the company with its principals in New York and it expects a downward trend in future charges.

BURMAH SHELL

This company has assured, as a result of protracted correspondence and negotiations, that the Royalty payment in 1967 will be less than half of the amount paid in 1966 (£18,518). A further step towards reduction in cost has been made by the abolition of the London Office, the long term effects of this change are yet to be seen.

A.O.C./B.O.C. (IT)

There has already been reduction in expenses in 1966 of nearly 25 per cent. This company is, however, slightly handicapped in this matter because of the efforts being made by it to rejuvenate the Digboi Oil fields for which technical know-how and expert advice is still being imported from U.K.

CALTEX

The expenses of this company are already nominal and represent actuals incurred on technical assistance required by it on specified projects. The actual cost of such assistance is subject to limitation laid down by the Reserve Bank of India, which has never been exceeded.

9.6. The Committee regret to observe that inspite of the recommendations made by the Oil Prices Enquiry Committee in 1961 and the Working Group on Oil Prices in 1965, heavy payments, amounting to approximately Rs. 1.6 crores are being made annually to their overseas offices by the various oil companies on account of services rendered. The payments made by the Burmah Shell and ESSO on this account are very heavy. The Committee see no justification for the payment of such heavy expenses. They are not convinced that such heavy payments are covered by the agreements concluded with these refineries. The Committee recommend that Government should take effective measures to drastically reduce payments on this account which would result in saving of foreign exchange considerably.

(ii) *Total remittances by Oil Companies*

9.7. As per information furnished by the Ministry the total remittances made by the foreign oil companies during the last five years are as shown in the statement below:

Statement showing Remittances made by Oil Companies

(Rs. in crores)

Name of Company	1962	1963	1964	1965	1966
Burmah Shell .	39·99	36·36	40·77	36·83	31·24
ESSO .	30·97	28·70	25·29	23·45	30·74
A.O.C. .	1·85	Nil	Nil	Nil	·65
Indo-Burmah Petroleum Co. .	0·03	0·03	0·04	0·05	0·02
Caltex	17·76	15·04	14·30	11·77	8·51
TOTAL .	90·60	80·13	80·40	72·10	71·16

9.8. It will be observed from the above statement that the remittances made by the various oil companies during 1961 to 1966 involved very heavy amounts. In reply to a question as to the steps taken by Government to reduce these remittances, the Secretary of the Ministry stated during evidence that "I think this is a misleading statement. It includes the remittances on account of crude oil which has been imported. I think it will be helpful to the Committee if we separate the figures on different counts . . . We will submit a revised statement."

9.9. Inspite of written enquiry no break up of the remittances made by the private oil companies was made available to the Committee.

9.10. Asked about the profits repatriable by these companies and those actually repatriated, the Ministry have stated that in the agreements concluded in 1951 with Standard Vacuum Oil Company (now ESSO) and Burmah Shell and in 1953 with Caltex for the establishment of refineries at Bombay and Visakhapatnam, an assurance has been provided, *inter alia,* for foreign exchange to be made available for remittance of profits. These refineries came on stream in 1954, 1955 and 1957, respectively. Information regarding profits repatriable and actually repatriated is maintained by the Reserve Bank of India.

However, according to the information furnished by the refining companies, the following remittances of profits have been made by each of them upto 1966:

(i) ESSO Refinery .	Rs.	3,720,000
(ii) Burmah Shell Refineries.	Rs.	300,164,582
(iii) Caltex Refinery. . .	Rs.	9,000,000

9.11. Information regarding profits retained in this country for further investment is stated by the Government to be not readily available. However, according to the information furnished by these companies the following foreign capital has actually been brought in during the period indicated against each:—

(i) ESSO Refinery (1953-66) .	Rs.	204,400,000
(ii) Burmah Shell Refineries. Ltd. (1953-66)	Rs.	145,383,350
(iii) Caltex Refinery (1955-66)	Rs.	85,069,566.

9.12. In the absence of a detailed break up of the total remittances, the Committee are unable to comment on the need or otherwise of the heavy remittances totalling over Rs. 394 crores made by the oil companies since 1962.

9.13. The Committee are rather surprised to note that Burmah Shell Refineries Ltd. alone remitted profits to the tune of over Rs. 30 crores upto 1966 while their foreign capital investment is stated to be about Rs. 14.53 crores only. They also note with concern that information regarding profits retained in this country by the foreign companies for further investment is not available with the Government. It clearly indicates that vital statistics regarding the break up of remittances by the oil companies as also amounts of retained profits are not maintained by Government. The Committee recomment that effective steps should be taken with immediate effect to maintain such important statistics and the foreign oil companies should be persuaded to reduce the quantum of remittances and to retain more and more profits earned in this country for further investment.

B. Profit Margins

9.14. The Working Group on Oil Prices in their Report have observed that "We consider a return of 12% on capital employed as fair and reasonable for the marketing activity. This is generally in line with the policy followed by the Tariff Commission for price fixations."

9.15. The Ministry in a written note have informed the Committee that the WGOP price formulation covers marketing activity only and came into force from 1st February, 1-2-66. The percentage of profit (before interest and taxation—as adopted in the price formulation) to average capital employed in the relevant accounting period is as under:—

	Year	Percentage of profit before interest and taxation to capital employed
(i) Burmah Shell (Marketing). . .	1966	7·37
(ii) ESSO (Marketing)	1966	5·66
(iii) Caltex (Marketing) . .	1966	19·12
(iv) Indian Oil Corpn. Ltd. . .	1966-67	9·76
(v) Indo-Burmah Petroleum Co. Ltd. . .	1966	15·50
(vi) Western India Oil Distributing Co. of India Ltd.	1966	Loss.
(vii) Assam Oil Company Ltd. .	1966	21·16

The figures for I.O.C. represent both the refining and marketing activity as the annual account does not exhibit the position separately for the two activities. The figure for A.O.C. includes producing, refining and marketing associate [*viz.* BOC (IT) Ltd.] ceased trading from 1.1.66 and its various assets transferred to A.O.C.

9.16. It has been stated that the actual profit margin of each company product-wise cannot be indicated as the same is not shown in the annual accounts.

9.17. Regarding refinery profits the Ministry have further stated that according to the Agreements concluded in 1951 with ESSO and Burmah Shell and in 1953 with Caltex for the establishment of the refineries at Bombay and Vizag., the prices of refined petroleum products are based on import parity, irrespective of the cost of crude, the cost of operations and the ultimate return to the refineries. This arrangement provides a self-regulating control on the profits of the refineries. However, these refineries were assured of duty protection for ten years from the commencement of the full-scale production or until 31st December, 1965, whichever is earlier, as it was made out at the time of entering into the agreement that a reasonable return on capital invested would not be available otherwise. The economics of operations of these refineries had improved due to larger refining capacities compared to what was originally envisaged at the time of conclusion of the relevant agreements. In view of this, with effect from 1st October, 1956, Burmah-Shell and ESSO were persuaded to give up their duty protection on Motor Spirit. Duty protection on Diesel Oils, Furnace Oil and Bitumen was surrendered on 1st July, 1959 by Burmah Shell and on 15th November, 1960 by ESSO. Caltex surrendered duty protection on 1.10.59 in respect of Motor Spirit and on 1.4.63 for Diesel Oil and Fuel Oils. With effect from 1.2.66 import duty of 20% *ad valorem* was imposed to provide protection to indigenous crude, but, this step also indirectly resulted in reducing the profits of the refineries. Consequent on devaluation of the rupee, the import duty on crude was withdrawn with effect from 6.6.66 but the amount of duty on crude payable was duty taken into account in variations made in the rates of basic and additional duties. Thus, the profits of the refineries remained reduced to the extent of import duty payable on crude despite the withdrawal of this levy from 6.6.66.

9.18. As to the profits of marketing companies the first significant attempt to control the profits of the marketing companies was made in August, 1957, when the earlier arrangement for the pricing of products was rescinded and it was decided that the broad basis of pricing should be actual cost *plus* reasonable profit. In May, 1958, the companies agreed, after protracted negotiations, to an *ad hoc* reduction in prices; which was mopped-up by Government by levy of additional (non-recoverable) duties. Thereafter, the accounts of these companies were examined by the Chief Cost Accounts Officer of the Government of India and in the negotiations that took place on the basis of his report of 28th March, 1959 further *ad hoc* reduction in prices was achieved, which was again mopped up by levy of additional (non-recoverable) duties. The Government of India set up an Oil Price Enquiry Committee in 1960 under the Chairmanship of Shri K. R. Damle, on the recommendations of which further reductions were applied from 1-10-1961 (remaining in force up to 31-1-1966), which was again mopped up by levy of additional (non-recoverable) duties. In the meantime, in May, 1964, the Working Group on Oil Prices was appointed under the Chairmanship of Shri J. N. Talukdar to determine, *inter alia* the ceiling selling prices ex-companies' storage points of various petroleum products in India.

The recommendations of the Working Group were applied from 1-2-1966 with certain modifications, the reductions imposed thereby have further been mopped up levy of additional (non-recoverable) duties. The cumulative effect of all these reductions at date is stated to be of the order of Rs. 30 crores annually.

9.19. During evidence the Committee came to understand that the foreign oil companies changed their production pattern to earn more profits by abandoning production of fuel oil and producing kerosene. The Secretary of the Ministry while admitting that at that point Government could have exercised the statutory authority in directing them to produce certain things stated that they produced kerosene which was needed in the country but even then the question was whether the Government should have used that power to meet the objectives. He, however, added that "they have lost our sympathy and consideration in the process."

9.20. The Secretary of the Ministry further stated that the profit margin on marketing is determined as a result of periodic studies made by the Government. Several Committees have gone into this matter and after examining the accounts of the companies they submit their reports and certain decisions are taken as a result of their reports. He added that "we have never worked on the basis of saying that you will not make profits larger than 'X' percent. We have said that assuming certain things, this is the element of profit which we will allow in our pricing structure. Whether they make that much profit or not is a matter firstly of efficiency of their operation, their costs and the nature of the refining operation etc . . . There is, however, no ceiling in the sense that 'you will not make more profits than this'. But then we fix prices for marketing purposes and we do say that on the money which you have invested, we shall allow a return of not more than 12 per cent before taxation."

9.21. The Committee note that there is no direct control by Government over the profit margins of the oil companies as their profits are stated to be regulated through the prices fixed for petroleum products and that there is no ceiling on profits as such.

9.22. The Committee note that the profit margins on account of refining are regulated by the procedure of fixing the prices of petroleum products which are based on import parity. In the opinion of the Committee, this system allows a very high margin of profit to the refineries and also stands in the way of reduction in the prices of petroleum products to the consumers. The Committee have in para 5.52 of this report emphasised the need to bring down the prices of petroleum products.

9.23. The Committee also note that the profits on account of marketing by some companies are more than indicated by the working Group on Oil Prices. The Committee urge that Government should devise measures so as to keep the margins of profit by these companies to a reasonable level. The Committee recommend that both these aspects should also be examined by the expert committee recommended in para 5.48.

(c) *Under writing of insurance for transport of crude*

9.24. The Oil Prices Enquiry Committee (1961) had been assured by the oil companies that they would consider insurance of their petroleum cargoes with the Indian Insurance Companies Organisation After four years the Working Group on Oil Prices (1965) stated that no significant progress had been made in that direction and recommended that the oil companies should actively puruse underwriting of their insurances by the Indian parties and report progress to Government from time to time. Asked about the action taken on this recommendation the Committee have been informed during evidence that the matter is under discussion with the Reserve Bank of India. The insurance covers a commodity which may have to be replaced in foreign exchange. A bulk of this insurance will have to be underwritten again with foreign companies. The Reserve Bank has taken the view that in the end no significant advantage will come in compelling the insurance of these cargoes with Indian companies because if there is a loss then that will have to be paid for in foreign exchange, and as such they have not pressed the matter very hard and have advised that it may be left as it is.

9.25. In another written note submitted to the Committee, the Ministry have stated that the total value of imports by the private oil companies during 1966 and the first 9 months of 1967 were as under which indicates the premia payable towards marine insurance estimated at 0.0755 per cent on f.o.b. adopted for the determination of the c.i.f. cost of products under the WGOP Price formulation.

	Total value of imports in Rs./lakhs		Estimated marine insurance premia payable in Rs./lakhs	
	1966	1967 (Jan. to Sept.)	1966	1967 (Jan. to Sept.)
(i) Products	1,553·46	1,245·28	1·00	0·90
(ii) Crude	5,610·37	5,952·42	4·00	4·05

The above date shows that the liability of insurance premium on imports of crude and products by the private oil companies is of the order of Rs. 5 lakhs annually.

9.26. The Government have stated that the question of underwriting the marine insurance by Indian parties has been under reference to the Ministry of Finance (Department of Economic Affairs) which has also consulted the Reserve Bank of India on the subject. The Reserve Bank has stated that under the current Exchange Control Regulations marine insurance on shipments to India may be covered either by the shippers abroad or by the importer in in India according whether the contract is on c.i.f. basis or on f.o.b/ C & F basis. Among the foreign oil companies in India, ESSO Caltex and C.R.L. import their bulk oil on c.i.f. basis while Burmah-Shell receives their supplies on consignment basis. In either case, since the import licences cover the full c.i.f. value of oil to be imported, it has been the practice of the oil companies to have marine insurance covered abroad by their principals, to recover the insurance premium from the offices in India as part of the cost of oil. Therefore, if the insurance is to be placed in India with Indian Insurance Companies it will be necessary for the Government to issue licences covering the c.i.f. value with a stipulation that insurance must be effected in India with Indian insurers. The Reserve Bank of India does not recommend such a departure from the normal practice of issuing all licences on c.i.f. basis. The Bank has further stated that their informal enquiries from the Oriental Fire and General have revealed that the insurer will be able to retain only 10 per cent of the business and the remainder will be passed on to foreign associate and thus foreign exchange saving would be small, *i.e.* Rs. 50,000 only on the estimated annual insurance premia of Rs. 5 lakhs. Moreover, in the event of loss, the claim will have to be made good in foreign currency, which will have to be provided by the Indian Exchange control to the insurance companies for meeting the claim. This would ultimately result in foreign exchange liability to India. Owning to the world wide cover held by the foreign oil companies and also due to the satisfactory past claims experience, they also enjoy comparatively lower rates of insurance premia.

9.27. However, marine insurance on imports of crude by Cochin Refineries Limited is undertaken by a syndicate of Indian companies *i.e.*, Oriental, New India and Home Insurance Companies. The leader of this syndicate is Oriental. Premium is paid to Oriental in rupees.

All major supplies of bulk and packed imports by IOC (MD) are insured by Indian parties.

9.28. Government have also stated that as a result of their persuation, effective from 1-1-1965, ESSO has concluded arrangements with Indian Insurance Agencies to cover all major insurance risks including marine risks in respect of crude and product imports. Burmah Shell has been insuring a part of its cargo of imports of crude oil and refined products with an Insurance Company in India since August, 1965. Burmah Shell has also made significant progress in effecting other classes of insurance with companies in India. With the other companies the matter is still being pursued.

9.29. The Committee are glad to learn that in pursuance of Government's efforts some foreign companies are making arrangements with Indian Insurance Agencies to cover all major insurance risks. They hope that efforts will continue to be made with other companies also to get all their insurance risks covered by the Indian Insurance Agencies.

X

GENERAL

A. Functioning of Oil Advisory Committee

10.1. The Oil Advisory Committee was set up by the Government of India *vide* Resolution No. 9(1)/58—Oil (PI) dated 14th January, 1960. According to this resolution the terms of reference of this Committee are *inter alia* the following:

(a) Preparation of forward estimates, product-wise and then area-wise, of consumption of various petroleum products with periodical revision at least once a year if not once in six months, of such forwarded estimates.

(b) Determination, from time to time, of the extent of likely deficit regarding particular products for the country as a whole and in particular areas, after taking into account the likely effect of plants in other spheres of the economy and the effectiveness of measures to curb or discourage consumption of such deficit products.

(c) Examination of ways and means to reduce, or eliminate surplus in any particular products, through increase in their consumption or exports or development of potential new uses for such products (or the distillate concerned).

(d) Preparation of product-wise forward estimates of refinery production, and periodical review and assessment of actual production so as to suggest ways and means of reaching the realisable product pattern best suited to the consumption pattern in the country, including modifications in existing specifications with due regard to quality control and safety.

(e) Determination, first on freight basis, of the area of economic supply for each refinery (existing and future) and, after assessing the relative deficits and surpluses of each product in the area which could be linked to the refinery concerned, examination of further adjustments in actual supply areas to reduce such deficits or surpluses while avoiding cross haulage.

(f) Assessment of the changing pattern of imports to meet such over-all deficits and yet to minimize actual outgo of foreign exchange, and of improvements that may be needed in existing port facilities for handling of petroleum products.

(g) Ways and means to ensure fullest utilisation of Indian flag ocean-going and coastal tankers to reduce outgo of foreign exchange on freight.

(h) Assessment of the needs of tanks wagons and other railway facilities to meet, in time, the movement requirements for petroleum products and also, the possibility of having product pipelines to relieve the Railways on sections on which particularly heavy petroleum traffic can be anticipated.

(i) Any other particular matter regarding refining and distribution of petroleum products that Government, on their or on suggestion made by the Committee, may from time time include in the terms of reference.

10.2. The composition of the Committee is given at Appendix V. It would be seen therefrom that the Oil Advisory Committee was reconstituted on 16th May, 1967 and 14th July, 1967.

10.3. It has been stated that only six meetings have been held by this Committee so far, two of which *viz* on 4-6-1965 and 23-4-1966 were held during the last three years. According to this resolution the meetings of the Oil Advisory Committee were to be held at least once every three months and oftener, if considered necessary by the Chairman.

10.4. Asked for the reasons for not holding the meeting of the Oil Advisory Committee as frequently as laid down by the Government in this behalf the Committee have been informed that the main item which the Oil Advisory Committee now considers from year to year are projections of future consumption estimates of petroleum products and examination of the data and factors on which these are based. And for this purpose it has not been considered necessary to hold more meetings as earlier envisaged.

10.5. On a specific enquiry by the Committee it has further been stated that no meeting of the reconstituted Oil Advisory Committee has been held so far "for want of sufficient material for discussion".

10.6. The Committee are concerned to note that the Oil Advisory Committee which was set up in 1960, with very wide and important terms of reference, has not been functioning properly. While the

Committee was originally intended to meet at least once in every three months and should have therefore met 32 times since 1960 it has met only 6 times so far. It is surprising that no meeting of this Committee has been neld since April, 1966 for want of sufficient material for discussion. The Committee are also unable to understand why the Oil Advisory Committee was at all reconstituted in May, 1967 when no meetings of this Committee were to be held thereafter. The Committee recommend that the whole matter regarding the utility of having an oil advisory committee should be examined thoroughly by Government and if it is considered essential it should be made to function effectively and play its intended role by calling periodical meetings of this committee.

B. Manufacture of drilling and other Equipments in the country

10.7. At present most of the drilling equipment used in the country is imported. A major portion of the refinery equipment is also imported.

10.8. The value of imports of oil and gas drilling equipment and accessories during each year of the Third Plan has been as follows:

Year.	Value
	(Rs. in lakhs)
1961-62	273·53
1962-63	812·92
1953-64	922·72
1964-65	665·77
1965-66	276·35
TOTAL	2951·29

10.9. As regards the quality of drilling equipment etc. with the Oil and Natural Gas Commission, the representative of the Ministry admitted during evidence that with the kind of equipment that the Commission had it took a little longer to de-rig, transport and rig up and that certainly added to the total cost as it was reflected in the per metre cost of drilling. Admitting that the quality of drilling equipment had an impact on the operational efficiency he added "but we have to cut our coat according to our cloth. The limitation

on our ability to find the necessary kind of resources for the equipment that we may wish to possess is also a factor to be taken into consideration....the only country which was prepared to assist us with equipment with credit at that time was the Soviet Union. Even today, we have great difficulty in getting free foreign exchange for maintenance purposes even."

10.10. As regards the question of manufacture of drilling rigs and machinery in the country the Minister for Industrial Development and Company Affairs stated in reply to a question in Lok Sabha on the 20th February, 1968 "It is not proposed to set up any new plant for the manufacture of drilling machinery. Heavy machine building plant of Heavy Engineering Corporation Ltd., Ranchi, is already designed for the manufacture of heavy oil drilling rigs."

10.11. The Committee note that there have been heavy imports of drilling equipment and accessories during the Third Plan period. They regret to learn that because of the difficulties in getting free foreign exchange the best available drilling equipment could not be imported. Since the quality of equipment has a direct bearing on the operational efficiency, the Committee feel that the programme of exploration and production of crude are bound to be adversely affected in the absence of the best possible drilling equipment etc.

10.12. The Committee feel that for accelerating the programme of exploration and exploitation for oil in the country, it is necessary to manufacture drilling and production equipment indigenously. It need hardly be emphasized that for overall progress in this field as well as for effecting savings in foreign exchange, Government should aim at attainment of self-sufficiency in equipment as early as possible. The Committee, therefore, strongly recommend that effective measures should be taken urgently by Government for the manufacture of drilling equipment as well as refinery equipment in the country. This, the Committee feel, should not be difficult as idle capacity may be available in most of the engineering units and particularly in the Heavy Engineering Corporation, Ranchi

which is stated to be already designed for the manufacture of heavy oil drilling rigs.

C. Capital Costs of the Public Sector Refineries

10.13. As per information furnished by the Government the total costs of the Refineries in the public sector are as follows:

	Capacity	Cost (Upto 30-6-67)
		(Rs. crores)
Gauhati	·8 m.t.	17·43
Barauni	2 m.t.	45·88
Gujarat	2 m.t.	28·85
Cochin	2·5 m.t.	29·00
Madras.	2·5 m.t.	45·00 (estimated)
Haldia	2·5 m.t.	46·00 (estimated)

10.14. Explaining the wide variations in the capital costs of the above refineries the Government have stated in a written note that "The reasons for variations in capital costs of refineries in public sector are due to various factors, such as, date of construction, number of products produced, types of process units installed etc. The refineries that have been, or are being, put up later, have cost more than those put up earlier due to a steady increase in costs of materials and services that are components of the aggregate capital cost. Further, Madras and Haldia refineries are being constructed when the rupee value (due to devaluation) of the foreign exchange component of capital cost has increased by 58%. Gujarat refinery, mainly, and Cochin refinery, partly, have been constructed in the pre-devaluation period.

10.15. Certain variations in costs also occur because of the variations in designs of the refineries as well as the facilities provided. Indian Oil Corporation's refineries have been equipped with their own ancillary services like thermal power station, water supply etc., which is not always true of other public sector refineries. Thus, Madras refinery is expected to have its own power station but not water supply, while Cochin refinery takes power from the Kerala State Electricity Board."

10.16. As regards checks exercised by the Ministry in this regard, it has been stated that the proposals put up for the construction of the refinery are examined in great detail by the Ministry in consultation with technical experts and Finance Ministry. A comparison with similar costs in refineries already erected in the public sector is invariably made. During the construction stage, the refinery companies and the Ministry's nominees on the Boards of Directors of these companies ensure that the said standard purchase and financial policies are followed and a strict watch is kept on the project expenditure through monthly and quarterly reviews.

10.17. In this connection it was also stated during evidence that the refineries, Indian Oil Corporation and other agencies were closely associated for the negotiations of the contracts, fixation of prices etc. and that the Government was fully in the picture at every stage. The Secretary of the Ministry was of the opinion that no other special measures were necessary.

10.18. The Committee, cannot over-emphasise the need to keep to the minimum the capital costs of the refineries as they vitally affect the production costs and ultimately the efficiency of the refineries. They hope that the experience gained in the setting up of the refineries in the public sector would prove of immense benefit in this regard.

D. Coordination between Oil and Natural Gas Commission and Oil India Limited

10.19. The two organisations engaged in the exploration and production of crude in the country are Oil and Natural Gas Commission—which is a statutory body and Oil India Ltd. in which Government are an equal partner with BOC|AOC.

10.20. The representative of the Ministry admitted during evidence that there is no regular exchange of information between the Oil and Natural Gas Commission and Oil India Ltd. regarding performance and standard cost etc. but that occasionally when they (Oil and Natural Gas Commission) need some information they request the Oil India Ltd. to furnish the same and this is done through the Ministry of Petroleum and Chemicals.

10.21. The Committee are constrained to observe that there is no proper coordination between the Oil and Natural Gas Commission and Oil India Limited regarding regular exchange of information about exploration, drilling etc. In the opinion of the Committee the Ministry of Petroleum and Chemicals who are mainly responsible in the matter, should bring about close coordination between these two organisations particularly when the same Joint Secretary of the Ministry is on the Board of Management of both these organisations.

XI

CONCLUSION

11.1. In the modern world Oil has an important role in the economy and industrialization of a country. Defence and economic development are not possible without Oil. The consumption of pertoleum products in fact is often taken as an index of the extent of industrialization of a country.

11.2. The *per capita* consumption of petroleum products in India is about the lowest and is even lower than that of its neighbouring countries like Ceylon, Indonesia and Pakistan. The requirements of pertoleum products, at present, are largely met by the various refineries set up in the country but more than half the crude which is processed by these refiniries is imported. During 1966-67 indigenous production of crude amounted to about 6 million tonnes while the imports came to about 8 million tonnes. In 1970-71, it is estimated that the requirements of imported crude would be about 10 to 11 million tonnes consting about Rs. 110 crores in foreign exchange. This gap will increase further and by 1975-76 it is estimated that about 16 million tonnes of crude valued at Rs. 160 crores per annum would be imported.

11.3. During the British regime there was no sector of our economy so neglected as oil. The common notion was that except Digboi, there was no oil to be found elsewhere in the country. After independence the Industrial Policy Resolution of 1948 made the State responsoible for the development of oil industry. There was, however, no systematic exploration for oil conducted till 1955 when the Oil and Natural Gas Directorate was set up. With a sedimentary area of 10 lakh sq. kilometers from Ladakh to Andaman and Nicobar islands, the progress in the exploration and prospecting for oil in the early years was halting and slow.

11.4. In view of the wide gap between demand and supply of crude in the country which is increasing year by year, it is of utmost importance for India to intensify the search for crude within the country so as to make it self-sufficient. The Committee note that in the various countries of the world, increasing investment is being made on petroleum exploration and production.

11.5. The Committee recommend that an all out-effort should be made on exploration of oil in the country particularly in areas which have a promising geological strata. Unless such a programme is planned and implemented, the country is likely to be tied eternally to the international market where crude fluctuates from year to year.

11.6. The Committee are glad that a network of refineries have been set up in the country since independence which meet practically all the demands for petroleum products of the country. Except for kerosene and lubricants, India has achieved self-sufficiency in all other types of petroleum products. With the setting up of Haldia Refinery and the various lubricating plants, India will be self-sufficient in these items also. This progress towards self-sufficiency in petroleum refining is heartening as it has resulted in considerable saving of foreign exchange. It is also a matter of satisfaction that the country is now exporting some petroleum products like High Speed Diesel Oil, Furnace Oil, Motor Gasolene and waxes, etc.

11.7. One of the disquieting features which has particularly struck the Committee is the policy regarding pricing of crude and petroleum products. The Committee have note that the prices of crude and petroleum products are based on the principle of import parity. It has been stated by Government that this principle is the result of the agreements with the private sector coastal refineries. These coastal refineries have been given the right to import crude from their own sources as also to price the petroleum products on the basis of import parity. The Committee have noted that the prices for the imported crude charged by these refineries have not been the most economic prices as no discount was allowed by these refineries till June, 1960 and even thereafter the full discount as available in the international oil market is not accounted for by them with the result that there is larger outgo of scarce foreign exchange on this account. The pricing of petroleum products on import parity has also created an anomalous position in that petroleum products are cheaper in the coastal areas than the hinterland where public sector refineries are located. This has naturally given rise to complaints of discrimination especially from States like Assam and Gujarat which produce the crude. While there might have been justification for the adoption of principle of import parity in 1951 when there was practically no refining capacity in the country, the continuance of this principle is open to question after large refining capacities have been set up in the inland areas. The Committee, have therefore recommended the appointment of a committee consisting of experts in petroleum technology, costing and financial matters to review the whole basis of pricing of crude and petroleum products. They hope that this committee will be able to bring about reduction in the price of crude as well as of petroleum products so that the general public also feels the impact of the birth of the petroleum industry in the country.

NEW DELHI;
Dated the 5th *April*, 1968.
Chaitra 16, 1890 (*Saka*).

P. VENKATASUBBAIAH,
Chairman,
Estimates Committee.

APPENDIX I

(*Vide* para 2.8)

Summary of Report on "Oil and Natural Gas Exploration in India"
By Mr. N. A. Kalinin

The areas recommended as promising were Punjab, Rajasthan, Cambay and West Bengal. In the Punjab, gas shows are known from Jawalamukhi, Balh and Nurpur and they are related to favourable geological structures and fault-planes. The Punjab area is bordered on the west by Jammu and Kashmir which in turn is adjacent to the Pakistan oil fields of Khaur, Dhulian etc. and hence Punjab appears to be the most promising area. Rajasthan deserves attention as it represents the marginal extension of Baluchistan occurrences of petroleum. In the Combay region there are many gas srows reported (*e.g. at Gogba*). On the whole, this region seemed to be promising but the geological conditions of the area needed more detailed investigation. The same considerations were true regarding West Bengal which is linked with East Pakistan Burma basin. The Ganga valley, which is not linked up with any oil-bearing areas, excepting those of the Assam in the east and those of Punjab and Pakistan in the west may turn out to be one of the biggest sedimentary basins and is highly encouraging. If it is confirmed that there are real margin sediments, apart from thick alluvium and fresh water deposits, this region (Ganga Valley) deserves the top-most priority. Considering the conditions and also depending upon available direct or indirect evidence the following scheme of priority is suggested and the volume of geological, geophysical and drilling work to be carried out in each of these areas was given as (1) Punjab, (2) Rajasthan, (3) Ganga Valley, (4) Cambay region.

A draft Five Year Plan for 1956-61 for oil and gas prospecting in India in which Mr. Kalinin suggested *inter alia*, the following action, was also prepared by him:—

To concentrate attention on two States—Punjab and Rajasthan (Jaisalmer area) which were then most studied and where the prospects were encouraging. Simultaneously it was essential to carry out geological and geophysical investigations, as well as deep test drilling, to a small extent in the Ganga Valley and West Bengal, geological and geophysical surveys and core drilling in Cambay area, geophysical and geological investigations on the

Madras coast. The latter four regions will constitute a reserve for extending the exploration during the following years and could compensate the first two regions in the case of possible failures.

2. To prepare by seismic surveys 16 areas and, by core drilling 13 areas, for deep tests. To cover by gravity and magnetic survey 163,000 sq. miles and by geological mapping 11,000 sq. miles.

3. To investigate by deep drilling oil and gas potentialities of five areas in the Punjab (Jawalamukhi, Balh, Nana, Dharamsala and Janauri) as well as the areas in the Jaisalmer region (Bandha and Thanot).

4. To start deep test drilling in the Ganga Valley after aeromagnetic, gravity, ground magnetic and seismic surveys if the results warrant it, in order to ascertain its oil prospects, in the West Bengal (the areas which were not under licence then) and in the plains of Punjab.

5. To organise research work for oil geology in order to lay the scientific foundation for oil and gas prospecting in India.

2. *Conclusions and Recommendations Contained in the Report "Exploration for Petroleum in India" by Mr. A. I. Leverson*

The conclusions and recommendations are summarised below:

1. The prospects for important oil and gas deposits in India seem to be good and justify a strong exploration programme in order to locate these deposits. Petroleum may be said to be created by discovery, because undiscovered petroleum is of no use to anyone.

2. Oil occurs under a wide variety of geological conditions and for that reason, a wide variety of exploration, ideas and methods must be applied, if most of the oil is to be discovered.

3. The best way of finding petroleum suspected of being present, is by bringing in many explorers. Each will search in his own way and the cumulative effect of applying many ideas to the search would lead to discoverey.

4. A single operator, whether a commercial or a government organisation, exhausts its ideas and the inevitable result is that a small fraction of the oil is discovered. A monopoly of ideas operating as a monopoly of ownership gives the smallest returns in discovery.

5. He believed that many exploration companies could be induced to come to India and explore for oil and gas on a basis that would be mutually satisfactory.

6. The present regulations should be revised and more modern rules and regulations adopted. These should be simple, fair to both the operator and the government, and should enable the operator to earn a profit if the venture is successful.

7. Two types of organisations were suggested to handle the petroleum exploration—a small administrative staff in case licences are given and outsiders are brought in, and a larger, more expensive operational staff in case the government decides to nationalise all exploration. A compromise between the two organisations is probably the practical answer, depending on the manner in which the exploration programme develops.

8. The best assurance of discovery, in case the government decides to do its own exploration, is to employ a team of the best technical people possible with wide experience in each branch of the work.

9. Technical manpower to conduct the exploration, whatever the method decided on, is one of the chief problems. From one to 10 years will be necessary to develop the experience needed, but the mineral exploration will go on for generations before it is all discovered; so whatever is done should be thought of as part of a long term programme.

10. The Indian School of Mines and Geology at Dhanbad should be expanded and built up to include a department of Petroleum Technology. Along with this, a curriculum on ground water can be initiated. A graduate curriculum is recommended to give more advanced training in the research and thinking necessary for overall Indian mineral programme.

11. The Indian Geological Survey should be expanded and much better equipped for work in both the field and the laboratory. It should carry most of the technical load of mineral exploration and in order to do so will need the complete support of the government.

12. One to three exploratory or stratigraphic test wells should be drilled to the basement on the north side of the Ganges Plan. Such wells should be designated "start" wells and the purpose would be to learn the nature of the rocks present and then to organise the most effective way to explore them.

13. Whichever way the exploration for petroleum was developed in India, it was recommended that an outside, technical, advisory

committee of consultants be employed. It should consist of a petroleum geologist, a petroleum geophysicist and a petroleum engineer, each with world wide experience. They should come to India one month each year, if possible meet here together, and advise on the exploration programme. This would keep the work abreast of new development and assure the proper functioning of the people engaged in the work and the interpretations of the results obtained.

3. *Summary of Report on "oil possibilities in India" by Dr. A. Bentz (April, 1956)*

After reviewing the oil possiblities in the various parts of India, Dr. Bentz expressed the view that as large tracts are to be covered for exploration of oil and gas, it is difficult to concentrate on all possible locations with the same attention due to the immensity of the work involved. Hence, the following priorities were suggested by him:—

1. *Very Promising Areas*:
   (a) Assam: Brahmaputra Plains and Naga Hills;
   (b) Gangetic Delta;
   (c) Cutch;
   (d) Jaisalmer;
   (e) Jammu.
2. *Promising Areas*:
   (a) Himalayan foredeep between Jammu and Assam;
   (b) Foot-hills zone of the Himalayas in Assam;
   (c) Kathiawar (Cambay).
3. *Less Promising Areas requiring further investigations*:
   (a) Border of the Bengal Bay (Andaman-Nicobar and E. Coast of Indian Peninsula);
   (b) West Coast of Indian Peninsula.

APPENDIX II

(*Vide* para 5.3)

Extracts fiom the relevant clauses of the Refinery Agreements with foreign oil companies regarding import of crude oil

(i) *Rgreement with M/s Standard-Vacuum Oil Co. (ESSO)* ....

.....Assurance that foreign exchange, either sterling or dollars as required, will be made available by the Government for:—

(a) Purchase of crude oil at world market prices prevailing at the time and place of shipment with freedom of choice as to source of supply. The crude oil will, most likely, originate from the Persian Gulf area. It is understood that (A) preference shall be given to crude oil produced in India by SVOC or a subsidiary thereof provided the crude oil can be delivered to the refinery without adversely affecting the profitability of the refinery and is of a quality which can be processed without substantial additional investment in the refinery, and the producing operation can be carried out under conditions considered economically satisfactory to SVOC and (B) if crude oil produced by others in India and suitable for processing in the refinery shall become available to SVOC at reasonable prices delivered at the refinery on a long term contract basis, and SVOC at the time shall not be producing or have reasonable prospect of producing, sufficient crude oil in India for the operation of the refinery, SVOC, consistent with the requirements of the refinery, its own production in India, and its then existing contract commitments, will attempt to contract for the purchase of such crude oil.....

(ii) *Agreement with M/s. Burmah Shell*

....The Oil Companies will be free to make their own arrangements for the importing of crude oil for the Indian Company and for distribution in India, by land and sea, of the refined products of the refinery and for the marketing of the refined products of the refinery. The Oil Companies will also be free to export such products of the refinery as from time to time may not be required by the Indian market.

It is understood that:—

(a) Preference shall be given to crude oil produced in India by the Oil Companies or either of them or by any subsidiary or associate of either of them, provided such crude oil can be delivered to the refinery without adversly affecting the profitability of the refinery and is of a quality which can be processed without substantial additional investment in the refinery, and the producing operation can be carried out under conditions considered economically satisfactory to the Oil Companies; and

(b) If crude oil produced by others in India and suitable for processing in the refinery shall become available to the Oil Companies at reasonable prices delivered at the refinery on a long-term contract basis, and the Oil Companies at the time shall not be producing, or have reasonable prospect of producing, sufficient crude oil in India for the operation of the refinery, the Oil Companies, consistent with the requirements of the refinery, their own production in India, and their then existing contract commitments, will attempt to contract for the purchase of such crude oil..........

(iii) *Agreement with M/s. Caltex (India) Ltd.*

The Government shall make available foreign exchange including Sterling or U.S. Dollar, as required by Caltex or the Indian Company for the following purposes:

(a) The purchase of crude oil at world market prices prevailing at the time and place of shipment, with freedom of choice as to source of supply.....

Caltex shall be free to make its own arrangements for the importation of crude oil for use in and processing by the refinery for distribution in India, by land and sea, of the refined products of the refinery, and for the marketing of those products. Caltex shall also be free to export such products of the refinery as from time to time may not be required by the Indian market. In the acquisition of crude oil, it is understood that preference shall be given to crude oil produced in India by Caltex or any associated company provided such crude oil can be delivered to the refinery without adversely affecting the profitability of the refinery and is of a quality which can be processed without substantial additional investment in the refinery, and provided production of such crude oil can be accomplished under conditions considered economically satisfactory to Caltex or the associated producing company. It is further understood that if crude oil produced by others in India and suitable for processing in the refinery shall become available to Caltex at reasonable prices delivered to the refinery on a long term contract basis, and if Caltex or its associates shall not then be producing, or have reasonable prospect of producing, sufficient crude in India for operation of the refinery, Caltex consistent with the requirements of the refinery, its own production in India, and its then existing contract commitments, will attempt to contract for the purchase of such crude oil.........

APPENDIX III

(*Vide* para 5.32)

No. 101 (26)/65-PPD

GOVERNMENT OF INDIA

MINISTRY OF PETROLEUM AND CHEMICALS

(DEPARTMENT OF PETROLEUM)

New Delhi, the 1st February, 1966.
12th Magha, 1887 (S)

RESOLUTION

The Government of India have carefully considered the Report of the Working Group set up on 12-5-1964 under the Chairmanship of Shri J. N. Talukdar, formerly Chief Secretary, Government of West Bengal to advise on the manner of determining ex-refinery and landed prices of petroluem products in the future and on other connected matters.

2. In this consideration, Government have taken particular not on two important factors that have been emerging of late, *viz.*, *firstly*, the increasing production of crude oil in the country and the growth of indigenous refining capacity based on both local and imported crudes and, *secondly*, as a consequence, the steady and substantial diminution in the import of finished products and changes in the terms and conditions of such imports. These developments require, amongst other things, that producers of indigenuos crude oil are assured of an adequate price consistent with the costs of exploration and production in the country. The practice followed hitherto has been to price indigenous crude delivered to the consumer on the basis of parity with the discounted and fluctuating prices of imported crude, from time to time. On crude imports, Government have been making efforts, with a fair measure of success, to secure prices that are in keeping with world market conditions. The establishment of import prices at fair and reasonable levels is important for the conservation of the country's foreign exchange resources, apart from being justified on purely commercial considerations. Government will, therefore, continue to work towards this objective with all the means at their disposal, as occasion requires. But in this situation a modification of the existing practice of pricing indigenous crude is called for, as it does not provide an economic base for the conduct

of oil exploration and production operations in the circumstances prevailing in the country. In other words, it is necessary to grant a measure of protection to indigenous crude producers and assure them of a price that is in keeping with the cost of their operations from time to time. Consistent with such crude costs, and in order to maintain the economics of refining operations at reasonable levels, ex-refinery product prices must be re-fixed appropriately. This would not, however, affect the policy of importing products, to the extent imports may be needed, on the best available terms.

3. After a careful study on the foregoing lines, Government have taken the following decisions:—

(i) Uutil further orders, the producers of indigenous crudes will, save in the cases in which a different basis for price fixation may exist under any agreement between Government and the producer, receive a price that is not less than the landed cost (exclusive of import duty, if any) calculated on the basis of the full posted F. O. B. prices of analogous crudes imported from the Middle East. Users of indigenous crude will be required or requested, as the case may be, to accept this price basis. If and when new circumstances arise, Government will reconsider the price basis now laid down.

(ii) Ex-refinery prices of bulk refined products in the cases of all refineries in the country, and landed prices, when applicable, will be fixed on the basis of import parity starting from full (*i.e.* undiscounted) F.O.B. postings at Abadan (at the lowest of Platt's) as on 18-5-65.

(iii) There will be levied on imported crude a protective import duty at a level determined by the related circumstances prevailing from time to time.

4. The recommendations of the Working Group in respect of the prices of bulk refined products, bitumen, lubricants, greases and specialities have been considered by Government against the above background and it has been decided to adopt and apply them with effect from the 1st February, 1966, subject to the following modifications:—

(a) In the case of Bulk Refined Petroleum Products (including Bitumen), the basic ceiling selling prices will be determined on 'import parity', subject to f. o. b. postings (without any discounts) at Abadan (at the lowest of Platt's in respect of Bulk Refined Products) as on the 18th May 1965 being adopted as the basis; no variations from the postings as on that date will be allowed except when Government is satisfied that changes are justified.

(b) The requirements of Working Capital computed by the Group will be recalculated (with due regard to the rates of central duties of excise and customs and wharfage in force on the 1st December, 1965) at 1/6th of the annual value of sales.

5. The current basic ceiling selling prices of Bulk Refined Petroleum Products (and Bitumen) to the consumers will remain unaltered, but there will be certain variations in the rates of Additional (Non-recoverable) Duties leviable under the Ministry of Finance (Department of Revenue. Notifiaction No. 99$65, dated 26-6-1965, issued under the Mineral Products (Additional Duties of Excise and Customs) Act, 1958 (No. 27 of 1958) to allow for changes in the various elements in the build up of ceiling selling prices.

6. The existing system of 'block control' on marketing and distribution charges and profit of the oil marketing companies in respect of Lubricants/Greases/Specialities will be continued at the ceiling rates recommended by the working group but there will be a change in the rate of Additional (non-recoverable) Duty applicable to these products in terms of the Notification of 26-6-65 mentioned in para 5 above.

7. The decisions herein contained about the prices of oil products will remain in force till 31-12-1967, to begin with, and Government may extend their validity for a further period or periods.

8. In regards to some of the other recommendations of the Working Group, the decisions of Government will be announced in due course.

Sd/-

(P. R. NAYAK)

Secretary to the Government of India.

New Delhi, the 1st February, 1966.

ORDER

ORDERED that a copy of this Resolution be communicated to all State Governments and Union Territory Administrations, Lok Sabha and Rajya Sabha Secretariats and the concerned Ministries and Departments of the Government of India.

ORDERED also that the Resolution be published in the Gazette of India for general information.

Sd/-

(P. R. NAYAK)

Secretary to the Government of India.

APPENDIX IV

(*Vide* para 5·43)

STATEMENT NO. 1

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967

Product:—Aviation Spirit 100/130 Octane.

(In Rupees per Kilolitre)

	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	178·27	178·27	178·27	178·27	178·27	178·27	178·27	178·27
2. Freight from Abadan	7·48	9·19	9·01	8·95	9·05	12·64	12·58	12·61
3. Insurance @ 0·0755% on FOB	0·13	0·13	0·13	0·13	0·13	0·13	0·13	0·13
4. Ocean Loss @ 0·54% C.I.F.	1·00	1·01	1·01	1·01	1·01	1·03	1·03	1·03
5. CIF (Pre-devaluation)	186·88	188·60	188·42	188·36	188·46	192·07	192·01	192·04
6. CIF (escalated by 58·81% post-devaluation)	296·78	299·52	299·23	299·13	299·29	305·03	304·93	304·98
7. Wharfage	9·86	7·59	4·42	3·15	5·00	7·70	4·46	25·86
8. Landing charges	0·60	0·60	0·60	0·60	0·60	0·60	0·60	0·60
9. *Landed Cost (excluding Customs duty).*								
(*a*) At pre-devaluation rate (5+7+8)	197·34	196·79	193·44	192·11	194·06	200·37	197·07	218·50
(*b*) At pre-devaluation rate (6+7+8)	307·24	307·71	304·25	302·88	304·89	313·33	309·99	331·44

STATEMENT NO. 2

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967

Product :—Aviation Spirit 115/145 Octane.

(In Rupees per Kilolitre)

	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65 .	194·21	194·21	194·21	194·21	194·21	194·21	194·21	194·21
2. Freight from Abadan	7·34	9·01	8·83	8·77	8·87	12·39	12·33	12·36
3. Insurance @ 0·0755% on FOB .	0·15	0·15	0·15	0·15	0·15	0·15	0·15	0·15
4. Ocean Loss @ 0·54% C.I.F. .	1·09	1·10	1·10	1·10	1·10	1·12	1·12	1·12
5. C.I.F. (Pre-devaluation)	202·79	204·47	204·29	204·23	204·33	207·87	207·81	207·84
6. CIF (escalated by 58·81% post-devaluation) .	322·05	324·72	324·43	324·34	324·50	330·12	330·02	330·07
7. Wharfage	9·85	7·59	4·42	3·08	5·00	7·70	4·46	25·36
8. Landing charges . .	0·60	0·60	0·60	0·60	0·60	0·60	0·60	0·60
9. *Landed cost (excluding Customs duty)*								
(*a*) At pre-devaluation rate (5+7+8) .	213·24	212·66	209·31	207·91	209·93	216·17	212·87	233·80
(*b*) At post-devaluation rate (6+7+8) . .	332·50	332·91	329·45	328·02	330·10	338·42	335·08	366·03

STATEMENT NO. 3

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967

Product :—Aviation Spirit 73 Clear.

(In Rupees per Kilolitre)

	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	153·51	153·51	153·51	153·51	153·51	153·51	153·51	153·51
2. Freight from Abadan	7·43	9·12	8·94	8·88	8·98	12·54	12·48	12·51
3. Insurance @ 0·0755% on FOB	0·12	0·12	0·12	0·12	0·12	0·12	0·12	0·12
4. Ocean Loss @ 0·54% CIF	0·87	0·88	0·88	0·88	0·88	0·90	0·90	0·90
5. C.I.F. (Pre-devaluation)	161·93	163·63	163·45	163·39	163·49	167·07	167·01	167·04
6. CIF (escalated by 58·81% post-devaluation)	257·16	259·86	259·57	259·48	259·64	265·32	265·28	265·28
7. Wharfage	9·85	7·59	4·42	3·12	5·00	7·70	4·46	25·66
8. Landing charges	0·60	0·60	0·60	0·60	0·60	0·60	0·60	0·60
9. *Landed cost (excluding Customs duty)*								
(*a*) At pre-devaluation rate (5+7+8)	172·38	171·82	168·47	167·11	169·09	175·37	172·07	193·30
(*b*) At post-devaluation rate (6+7+8)	267·61	268·05	264·59	263·20	265·24	273·62	270·29	291·54

STATEMENT No. 4

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967

Products :—Aviation Turbine Fuel

(In Rupees per Kilolitre)

	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	111·87	111·87	111·87	111·87	111·87	111·87	111·87	111·87
2. Freight from Abadan	8·26	10·14	9·94	9·87	9·98	13·94	13·87	13·91
3. Insurance @ 0·0755% on FOB	0·08	0·08	0·08	0·08	0·08	0·08	0·08	0·08
4. Ocean Loss @ 0·65% CIF	0·30	0·31	0·30	0·30	0·30	0·31	0·31	0·31
5. C.I.F. (Pre-devaluation) . .	120·51	122·40	122·19	122·12	122·23	126·20	126·13	126·17
6. CIF (escalated by 58·81% post-devaluation) .	191·38	194·38	194·05	193·94	194·11	200·42	200·31	200·37
7. Wharfage	2·37	3·37	2·96	1·96	2·54	3·59	2·40	9·12
8. Landing charges	0·88	0·88	0·88	0·88	0·88	0·88	0·88	0·88
9. *Landed cost (excluding Customs duty)*								
(*a*) At pre-devaluation rate (5+7+8) .	123·76	126·65	126·03	124·96	125·65	130·67	129·41	136·17
(*b*) At post-devaluation rate (6+7+8) . .	194·63	198·63	197·89	196·78	197·53	204·89	203·59	210·37

STATEMENT NO. 5

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967.

Product :—Motor Spirit.

(In Rupees per Kilolitre)

	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	81·71	81·71	81·71	81·71	81·71	81·71	81·71	81·71
2. Freight from Abadan	7·45	9·15	8·97	8·91	9·01	12·58	12·52	12·55
3. Insurance @ 0·0755% on FOB	0·06	0·06	0·06	0·06	0·06	0·06	0·06	0·06
4. Ocean Loss @ 0·33% on CIF	0·29	0·30	0·30	0·30	0·30	0·31	0·31	0·31
5. C.I.F. (Pre-devaluation)	89·51	91·22	91·04	90·98	91·08	94·66	94·60	94·63
6. CIF (escalated by 58·81% post-devaluation)	142·15	144·87	144·58	144·49	144·64	150·33	150·23	150·28
7. Wharfage	9·85	7·59	4·42	3·13	5·00	7·70	4·46	25·75
8. Landing charges	0·67	0·67	0·67	0·67	0·67	0·67	0·67	0·67
9. *Landed cost (excluding Customs duty)*								
(*a*) At pre-devaluation rate (5+7+8)	100·03	99·48	96·13	94·78	96·75	103·03	99·73	121·05
(*b*) At post-devaluation rate (6+7+8)	152·67	153·13	149·67	148·29	150·31	158·70	155·36	176·70

STATEMENT NO. 6

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967

Product :—High Speed Diesel Oil.

(In Rupees per Kilolitre)

	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	85·91	85·91	85·91	85·91	85·91	85·91	85·91	85·91
2. Freight from Abadan	8·79	10·79	10·58	10·51	10·63	14·84	14·77	14·80
3. Insurance @ 0·0755% on FOB	0·06	0·06	0·06	0·06	0·06	0·06	0·06	0·06
4. Ocean Loss @ 0·31% on CIF	0·29	0·30	0·30	0·30	0·30	0·31	0·31	0·31
5. C.I.F. (Pre-devaluation)	95·05	97·06	96·85	96·78	96·90	101·12	101·05	101·08
6. CIF (escalated by 58·81% post-devaluation	150·95	154·14	153·81	153·65	153·89	160·59	160·48	160·53
7. Wharfage	5·95	3·37	3·70	2·08	2·69	8·30	2·70	9·71
8. Landing charges	0·62	0·62	0·62	0·62	0·62	0·62	0·62	0·62
9. *Landed cost (excluding Customs duty)*								
(a) At-pre-devaluation rate (5+7+8)	101·62	101·05	101·17	99·48	100·21	110·04	104·37	111·41
(b) At post-devaluation rate (6+7+8)	157·52	158·13	158·13	156·35	157·20	169·51	163·80	170·86

STATEMENT NO. 7

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967.

Product:—Kerosene Superior.

(In Rupees per Kilolitre)

	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	104·41	104·41	104·41	104·41	104·41	104·41	104·41	104·41
2. Freight from Abadan .	8·28	10·16	9·96	9·89	10·00	13·97	13·91	13·94
3. Insurance @ 0·0755% on FOB	0·08	0·08	0·08	0·08	0·08	0·08	0·08	0·08
4. Ocean Loss @ 0·25% on CIF .	0·28	0·29	0·29	0·29	0·29	0·30	0·30	0·30
5. C.I.F. (Pre-devaluation)	113·05	114·94	114·74	114·67	114·78	118·76	118·70	118·73
6. CIF (escalated by 58·81% post-devaluation) .	179·54	182·54	182·22	182·11	182·28	188·60	188·51	188·56
7. Wharfage	2·37	3·37	2·96	1·96	2·54	3·59	2·40	9·14
8. Landing charges .	0·43	0·43	0·43	0·43	0·43	0·43	0·43	0·43
9. *Landed cost (excluding Customs duty)* .								
(*a*) At pre-devaluation rate (5+7+8) .	115·85	118·74	118·13	117·06	117·75	122·78	121·53	128·30
(*b*) At post-devaluation rate (6+7+8) . .	182·34	186·34	185·61	184·50	185·25	192·62	191·34	198·13

STATEMENT NO. 8

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967.

Product :—Kerosene Inferior.

(In Rupees per Kilolitre)

	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	80·93	80·93	80·93	80·93	80·93	80·93	80·93	80·93
2. Freight from Abadan	8·41	10·32	10·12	10·05	10·16	14·19	14·13	14·16
3. Insurance @ 0·0755% on FOB	0·06	0·06	0·06	0·06	0·06	0·06	0·06	0·06
4. Ocean Loss @ 0·25% on CIF .	0·22	0·23	0·23	0·23	0·23	0·24	0·24	0·24
5. C.I.F. (Pre-deval.) .	89·62	91·54	91·34	91·27	91·38	95·42	95·36	95·39
6. CIF (escalated by 58·81% post-deval.)	142·33	145·37	145·06	144·95	145·12	151·54	151·44	151·49
7. Wharfage	2·37	3·37	2·96	1·99	2·54	3·60	2·40	9·29
8. Landing charges	0·27	0·27	0·27	0·27	0·27	0·27	0·27	0·27
9. *Landed cost (excluding customs duty)*								
(*a*) At pre-devaluation rate (5+7+8)	92·26	95·18	94·57	93·58	94·19	99·29	98·03	104·95
(*b*) At post devaluation rate (6+7+8)	144·97	149·01	148·29	147·21	147·93	155·41	154·11	161·05

STATEMENT NO. 9

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967.

Product :—Vaporising Oil.

(In Rupees per Kilolitre)

	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	100·76	100·76	100·76	100·76	100·76	100·76	100·76	100·76
2. Freight from Abadan	8·50	10·44	10·23	10·16	10·28	14·35	14·28	14·32
3. Insurance @ 0·0755% on FOB	0·08	0·08	0·08	0·08	0·08	0·08	0·08	0·08
4. Ocean Loss @ 0·35% on CIF .	0·38	0·39	0·39	0·39	0·39	0·40	0·40	0·40
5. C.I.F. (Pre-deval.) . . .	109·72	111·67	111·46	111·39	111·51	115·59	115·52	115·56
6. CIF (escalated by 58·81% post-deval.) .	174·25	177·34	177·01	176·90	177·09	183·57	183·46	183·52
7. Wharfage	2·37	3·37	2·96	2·01	2·54	8·29	2·40	9·39
8. Landing charges . .	1·50	1·50	1·50	1·50	1·50	1·50	1·50	1·50
9. *Landed cost* (*excluding customs duty*)								
(*a*) At pre-devaluation rate (5+7+8) .	113·59	116·54	115·92	114·90	115·55	125·38	119·42	136·45
(*b*) At post devaluation rate (6+7+8) . .	178·12	182·21	181·47	180·41	181·13	193·36	187·36	194·41

STATEMENT NO. 16

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967.

Product : Light Diesel Oil

(In Rupees per Kilolitre)

	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	83·07	83·07	83·07	83·07	83·07	83·07	83·07	83·07
2. Freight from Abadan	9·08	11·14	10·92	10·85	10·97	15·32	15·25	15·28
3. Insurance @ 0·0755% on FOB	0·06	0·06	0·06	0·06	0·06	0·06	0·06	0·06
4. Ocean Loss @ 0·44% on CIF.	0·41	0·41	0·41	0·41	0·41	0·43	0·43	0·43
5. C.I.F. (Pre-deval.)	92·62	94·68	94·46	94·39	94·51	98·88	98·81	98·84
6. CIF (escalated by 58·81% post-deval.)	147·09	150·36	150·01	149·90	150·09	157·03	156·92	156·97
7. Wharfage	5·95	3·47	3·71	2·15	2·78	8·31	2·70	10·03
8. Landing charges	0·55	0·55	0·55	0·55	0·55	0·55	0·55	0·55
9. *Landed cost (excluding customs duty)*								
(a) At pre-devaluation rate (5+7+8)	99·12	98·07	98·72	97·09	97·84	107·74	102·06	109·42
(b) At post devaluation (6+7+8)	153·59	154·38	154·27	152·60	153·42	165·89	160.17	167.55

STATEMENT NO. 11

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967.

Product: Furnace Oil:

(In Rupees per Tonne)

	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	49·29	49·29	49·29	49·29	49·29	49·29	49·29	49·29
2. Freight from Abadan	10·63	13·06	12·80	12·71	12·86	17·96	17·87	17·91
3. Insurance @ 0·0755% on FOB	0·04	0·04	0·04	0·04	0·04	0·04	0·04	0·04
4. Ocean Loss @ 0·11% on CIF	0·07	0·07	0·07	0·07	0·07	0·07	0·07	0·07
5. C.I.F. (Pre-deval.)	60·03	62·46	62·20	62·11	62·26	67·36	67·27	67·31
6. CIF (escalated by 58·81% post-deval.)	95·33	99·19	98·78	98·64	98·88	106·97	106·83	106·90
7. Wharfage	6·38	3·72	3·98	2·52	[illegible]	8·91	3·86	11·85
8. Landing charges	0·27	0·27	0·27	0·27	0·27	0·27	0·27	0·27
9. *Landed cost (excluding customs duty)*								
(*a*) At pre-devaluation rate (5+7+8)	66·68	66·45	66·45	64·90	65·79	76·54	71·40	79·33
(*b*) At post devaluation rate (6+7+8)	101·98	103·18	103·03	103·43	102·41	116·15	110·96	118·92

STATEMENT NO. 12

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967.

Product: Bitumen Straight Grades.

(In Rupees per Tonne)

	Bulk Parity	Packed Parity						
	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag.	Calcutta
1. F.O.B. Abadan as on 18-5-65	50.48	138.02	138.02	138.02	138·02	138.02	138.02	138·02
2. Freight from Abadan	12·88	59·94	59·94	59·94	59.94	68.29	72·46	72· 6
3. Insurance @ 0·0755% on FOB for bulk and at 0·090% on CIF for packed	0·04	0.18	0·18	0·18	0·18	0·19	0·19	0.19
4. Ocean Loss @ 0·10% on CIF	0·06	0·20	0 20	0·20	0·20	0·21	0·21	0·21
5. C.I.F. (Pre deval.)	63·46	198·34	198·34	198· 4	198·34	206·71	210·88	210·88
6. CIF escalated 58·81% (post-deval.)	100·78	314·98	314·98	314·98	314.98	328·28	334·90	334·90
7. Wharfage	3·83	5·23	4·97	3·55	3·42	8·01	3·82	12·93
8. Landing charges	0·74	0·74	0·74	0·74	0·74	0·74	0·74	0·74
9. *Landed cost (excluding customs duty)*								
(*a*) At pre-devaluation rate (5+7+8)	68·03	204·31	204·05	202·63	202·50	215·46	215·44	224·55
(*b*) At post devaluation rate (6+7+8)	105·35	320·95	320·69	319·27	319·14	337·03	339·46	348·57

STATEMENT NO. 13

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967.

Product: Bitumen Cutbacks BS.

(In Rupees per Tonne)

	Bulk Parity	Packed Parity						
	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	70·74	170·91	170·91	170·91	170·91	170·91	170·91	170·91
2. Freight from Abadan (AFRA for bulk and Conference rates for packed)	12·83	61·05	61·05	61·05	61·05	69·57	73·85	73·85
3. Insurance @ 0·0755% on FOB for bulk and 0·0905% on C&F for packed	0·05	0·21	0·21	0·21	0·21	0·22	0·22	0·22
4. Ocean Loss @ 0·10% on CIF	0·08	0·23	0·23	0·23	0·23	0·24	0·24	0·24
5. C.I.F. (Pre-deval.)	83·75	232·40	232·40	232·40	232·40	240·94	245·22	245·22
6. CIF (escalated by 58·81% post -deval.)	133·00	369·07	369·07	369·07	369·07	382·64	389·43	389·43
7. Wharfage	3·90	5·33	5·07	3·62	3·49	8·16	3·89	13·18
8. Landing charges	0·74	0·74	0·74	0·74	0·74	0·74	0·74	0·74
9. *Landed cost (excluding Customs duty)*								
(*a*) At pre-devaluation rate (5+7+8)	88·39	238·47	238·21	236·76	236·63	249·84	249·85	259·14
(*b*) At post devaluation rate (6+7+8)	137·64	375·14	374·88	373·43	373·30	391·54	394·06	403·35

STATEMENT NO. 14

Statement showing the landed cost of main petroleum products at various ports as on 1-7-1967.

Product: Bitumen Cutbacks R.C. grade.

(In Rupees per Tonne)

	Bulk Parity	Packed Parity						
	Bombay	Kandla	Okha	Goa	Cochin	Madras	Vizag	Calcutta
1. FOB Abadan as on 18-5-65	80·59	180·76	180·76	180·76	180·76	180·76	180·76	180·76
2. Freight from Abadan (AFRA for bulk and Conference rates for packed)	12·88	61·05	61·05	61·05	61·05	69·57	73·85	73·85
3. Insurance @ 0·0755% on FOB for bulk and 0·00905% on C&F for packed	0·06	0·22	0·22	0·22	0·22	0·23	0·23	0·23
4. Ocean Loss @ 0·10% on CIF	0·09	0·24	0·24	0·24	0·24	0·25	0·25	0·25
5. C.I.F. (Pre-deval.)	93·62	242·27	242·27	242·27	242·27	250·81	255·09	255·09
6. CIF (escalated by 58·81% post-deval.)	148·68	384·75	384·75	384·75	384·75	398·31	405·11	405·11
7. Wharfage	3·90	5·33	5·07	3·62	3·49	8·16	3·89	13·18
8. Landing charges	0·74	0·74	0·74	0·74	0·74	0·74	0·74	0·74
9. *Landed cost (excluding customs duty)*								
(*a*) At pre-devaluation rate (5+7+8)	98·26	248·34	248·08	246·63	246·50	259·71	259·72	269·01
(*b*) At post devaluation rate (6+7+8)	153·32	390·82	390·56	389·11	388·98	407·21	409·74	419.3

APPENDIX V

(*vide* para 10.2)

Composition of the Oil Advisory Committee as reconstituted on 16th May, 1967 and 14th July, 1967.

GOVERNMENT OF INDIA

MINISTRY OF PETROLEUM AND CHEMICALS

(Department of Petroleum)

New Delhi, the 16th May, 1967.

NOTIFICATION

No. 30(2)/67-*Tech.*—The Government of India have been pleased to revise with immediate effect the composition of the Oil Advisory Committee, constituted by Resolution No. 9(1)/58-Oil(Pl), dated the 14th January, 1960 and amended from time to time, as follows:—

(1) Shri Ashok Mehta, Minister of Planning Petroleum & Chemicals and Social Welfare	Chairman.
(2) Shri K. Raghuramaiah, Minister in the Ministry of Petroleum and Chemicals .	Dy. Chairman.
(3) Secretary, Ministry of Petroleum and Chemicals	Member
(4) Joint Secretary, Department of Petroleum, Ministry of Petroleum and Chemicals	Do.
(5) Secretary, Department of Economic Affairs, Ministry of Finance . . .	Do.
(6) Secretary, Department of Coordination Ministry of Finance . . .	Do.
(7) Secretary, Ministry of Defence .	Do.
(8) Secretary, Department of Industrial Development (Ministry of Industrial Development and Company Affairs) .	Do.
(9) Secretary, Department of Mines & Metals Ministry of Steel, Mines & Metals	Do.
(10) Secretary Ministry of Irrigation and Power .	Do.

(11) Secretary, Ministry of Transport and Shipping	Member
(12) Member (Transport, Railway Board, Ministry of Railways)	Do.
(13) Adviser (Industry & Minerals) Planning Commission	Do.
(14) Director General, Technical Development	Do.
(15) Chairman, Oil and Natural Gas Commssion, Tel. Bhavan, Dehra Dun . . .	Do.
(16) Chairman, Indian Oil Corporation, Limited, New Delhi . . .	Do.
(17) Managing Director, Indian Oil Corporation (Refineries Division), New Delhi .	Do.
(18) Managing Director, Indian Oil Corporation (Marketing Division), Bombay .	Do.
(19) Director, Indian Institute of Petroleum Dehra Dun	Do.
(20) Chief Representative, M/s. Burmah Shell Oil Storage & Distributing Co. of India, Ltd., New Delhi . . .	Do.
(21) General Manager, ESSO Standard Eastern Inc., Bombay . . .	Do.
(22) Resident Vice-President, Caltex (India) Ltd., Bombay	Do.
(23) Managing Director, Oil India, Limited New Delhi	Do.
(24) President, Federation of Indian Chambers & Commerce Industry, New Delhi .	Do.
(25) The President, All India Petroleum Traders' Association, Calcutta . . .	Do.
(26) The President, Federation of Indian Automobile Association, Bombay . . .	Do.
(27) General Secretary, National Federation of Petroleum Workers. Bombay .	Do.
(28) Secretary General, All India Motor Unions' Congress 16-A, Asaf Ali Road, New Delhi .	Do.

(29) The Executive Director, Fertilizer Association of India, 85, Sundar Nagar, New Delhi-11. Member

S. R. SUNDARAM,

Deputy Secretary to the Government of India.

To

The Manager,
Government of India Press,
Faridabad.

Copy forwarded for information to:—

(1) All the members of the Oil Advisory Committee, as listed above.

(2) All Ministries of the Government of India.

S. R. SUNDARAM,

Deputy Secretary to the Government of India.

GOVERNMENT OF INDIA

MINISTRY OF PETROLEUM AND CHEMICALS

(Department of Petroleum)

New Delhi, the 14th July, 1967.

NOTIFICATION

F. No. 30(2)|67-*Tech.* The Government of India are pleased to make the following amendments to the membership of the Oil Advisory Committee as earlier reconstituted *vide* this Ministry's Notification of even number dated 16th May, 1967.

1.	Read	" Chairman, Railway Board, Ministry of Railways ".
	For . . .	" Member (Transport, Railway Board Ministry of Railways)".
2.	Read . .	"Secretary, Insurance & Plan Finance, Ministry of Finance ".
	For . .	" Secretary, Department of Coordination, Ministry of Finance ".

S. R. SUNDARAM,

Deputy Secretary to the Government of India.

To

The Manager,
Government of India Press,
Faridabad.

Copy to all members of the Oil Advisory Committee.

Copy to the Ministry of Railways (Railway Board), New Delhi with reference to their O.M. No. E67CO1|56|RBI dated 8th June, 1967.

Copy to the Secretary, Insurance and Plan Finance, Ministry of Finance, with reference to their office order No. F.4(24)-E.I(A)/67, dated 19th May, 1967. A copy of Resolution No. 9(1)/58-Oil(P1) dated 14th January, 1960 and notification No. 30(2)/67-Tech. dated 16th May, 1967 are enclosed herewith.

S. R. SUNDARAM,

Deputy Secretary to the Government of India.

APPENDIX VI

Statement showing summary of Recommendations/conclusions.

S. No.	Reference to Para No. in the Report.	Summary of Recommendations/Conclusions.
(1)	(2)	(3)
1.	1.26	It will be seen from the figures in para 1.25 that the *per capita* consumption of Petroleum products in India is much lower than that of its neighbouring countries like Ceylon, Indonesia and Pakistan.
2.	2.5.	While the Committee realise that at the time of adoption of the first Industrial Policy Resolution in 1948, Government lacked adequate technical and financial resources including foreign exchange resources for the import of rigs and other highly sophisticated equipment for survey, prospecting and exploration of oil in the country, they are unable to appreciate why it should have taken the Government more than seven years to set up the Oil and Natural Gas Directorate. In the absence of such organisation whatever efforts were made in this behalf lacked drive and direction. The Committee consider that in any case the efforts initiated in 1955 to arrange for technical and financial assistance for oil exploration could well have been preceded by measures to set up an organisation for oil exploration in 1951 at least when they entered into agreements for setting up coastal refineries in the private sector based on imported crude. The Committee cannot help feeling that till 1955 the programme of exploration and prospecting for oil in the country

(1)	(2)	(3)
		was not given the serious attention that it deserved. The steps taken by Government for exploring oil through collaborate efforts could only be considered half-hearted. Viewed in the light of the wide gap between the availability of indigenous crude and the requirements thereof for the running of refineries set up in the country and the time taken in exploration and commercial production of oil, the Committee consider that a determined effort was required to push through the programme of exploration and prospecting for oil in the country from the very beginning. The Committee recommend that energetic efforts should now be made by Government to accelerate the pace of exploration and prospecting of oil in the country so as to meet domestic demand from indigenous production and obviate the necessity for imports as early as possible.
3.	2.12	The Committee are unable to appreciate why it was necessary for Government to invite foreign experts from three different countries almost simultaneously to advise on oil exploration in the country. Experts from U.S.A. and West Germany were invited when the Russian Team was already working in the country and had not even submitted the report. According to the Government's own admission the report of Mr. Kalinin of U.S.S.R. was comprehensive enough to form the basis of the oil exploration programme in the Second Plan while the reports of the other two experts were considered too general. Even if second opinion was considered necesary the normal course would have been to await the report of the first expert. The Committee hope that such instances would not be repeated in future.
4.	2.17	The Committee regret that Government spent a sum of Rs. 1.84 crores as their share in the Indo Stanvac Petroleum Project—a joint venture of the Government of India and the Standard

(1)	(2)	(3)
		Vacuum Oil Company—which proved a failure. It is unfortunate that certain areas in the West Bengal basin where it operated, were not completely evaluated by the Stanvac. In this connection it is significant to note that commercial gas fields have been discovered in East Pakistan which forms part of the greater Bengal basin. The Committee are glad that the Oil and Natural Gas Commission has restarted exploration work in that area. They hope that the exploration programme in that area would be accelerated so as to correctly assess its oil potential as early as possible. This is particularly important as the Haldia refinery which is being set up in that region, would have to depend on imported crude till the domestic supply is ensured.
5.	2.18	The Committee have examined the working of 'Oil India Limited' and have commented thereon in a separate Report.
6.	2.23 to 2.25	The Committee regret to note that even after two decades of the attainment of independence and the Industrial Policy Resolution of 1948 the progress made by Government in the exploration and assessment of oil potentialities in the land sedimentary areas of the country has been far from satisfactory. Hitherto out of over 10 lakh sq. kilometers of land sedimentary area, 4.3 sq. lakh k.m. has been covered by reconnaissance/detailed seismic surveys, 4 lakh sq. k.m. by gravity-*cum*-magnetic seismic surveys and only 1.15 lakh sq. k.m. by semi-detailed/detailed mapping. The Committee are unhappy that about one-third of the structures discovered so far, have not yet been tested by drilling. The Committee realise that there are various stages in petroleum exploration which is beset with many uncertainties and that heavy capital investment is also required for petroleum exploration and prospecting.

(1)	(2)	(3)
		Nevertheless it is of paramount importance for a country like India which largely depends on imported crude, to develop its own oil resources failing which there will be an ever-increasing drain on the country's foreign exchange resources. It is, therefore, imperative that known sedimentary areas in the country are explored for oil as early as possible. This calls for intensive geophysical and geological surveys and exploratory drilling. The Committee feel that a determined bid for an accelerated programme of exploration and prospecting in a big way of all the sedimentary areas of the country is called for. Care should also be taken to avoid delay in testing and assessing the oil potentiality of the structure after they have been discovered.
7.	2.32 2.33	The Committee feel that the progress of drilling operations in the Gulf of Cambay where interesting structures were located in 1964 is slow. It is unfortunate that the contract with S.N.A.M. for carrying out drilling in that area had to be terminated on account of the destruction of their mobile offshore drilling platform. As there are bright prospects of discovering oil in the Gulf of Cambay area, the Committee strongly urge that negotiations with foreign oil companies for offshore exploration in that area should be expedited. Simultaneously Government should vigorously pursue the feasibility of undertaking departmentally offshore drilling in shallower areas with Soviet assistance. The Committee also urge the Government to take expeditious action on the report of the Soviet Team so as to accelerate the pace of off-shore drilling in the country.

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(1)	(2)	(3)
8.	2.40	The Committee are glad to note that Government has looked beyond its own frontiers to explore for oil to meet domestic demand. They are happy that Government are hopeful about obtaining oil from the Persian Gulf operations by 1970. In view of the wide gap between production and requirements of crude in the country, the Committee would urge intensification of exploration activities in the Persian Gulf which is stated to have promising possibilities. They hope that the long experience of the other partners in this venture would be of immense benefit in this regard.
9.	2.44	The Committee note that the existing proved and indicated oil reserve in the country are capable of giving an annual crude production of about 9 to 10 million tonnes by 1970-71 as against a demand of about 20 to 22 million tonnes by 1970-71 and 30 million tonnes by 1975-76. Thus there will be a wide gap between indigenous production and demand for oil which is estimated at 11 million tonnes in 1970-71 and 16 million tonnes in 1975-76. This underlines the imperative need to intensify the search for oil in the country so as to increase the quantum of the available reserves as early as possible.
10.	3.5	The Committee regret to note that there was no production of crude oil in the public sector during the first two Plan periods. This is not a happy reflection on the Government's role in the implementation of the Industrial Policy Resolution 1948 regarding setting up of new undertakings in the field of mineral oil in the public sector. Had the Oil and Natural Gas Commission been set up soon after 1948 or even in early fifties, it would perhaps have been possible to produce crude on a commercial scale in the public sector at least during the Second Plan period.

(1)	(2)	(3)
11.	3.10 3.11	The Committee observe that there has been heavy shortfall in the production of crude oil in the public sector during the Third Five Year Plan. Compared to the original target of 6 million tonnes, the actual production was 3.42 million tonnes *i.e.* about 56 per cent. This achievement fell far short of even the target of 4.68 million tonnes fixed at the time of mid-term appraisal. It is regrettable that this shortfall is partly attributed to the delay of about 12 months in the commissioning of the Gujarat refinery on account of which oil at the Ankleshwar field had to be kept underground. The Committee are concerned to note that the shortfall in the production of crude by the Oil India in the private sector, was also due to the inability of the Government refineries at Gauhati and Barauni to lift the stipulated quantities of crude. These failures of the refineries in the public sector to adhere to the scheduled timings of commissioning resulted in non-utilisation of the crude production capacities created at considerable costs. These instances underline the importance of closer coordination between inter-related industries and call for determined efforts by all concerned to adhere to the schedules with a view to avoid idle capacities and consequential losses. The Committee urge that Government should also keep a close watch on the progress of interlinked industries so as to avoid a recurrence of such matters.
		The Committee would further like to emphasise that every care should be taken by Government to fix realistic targets and to ensure that once the targets have been fixed, all efforts are made to achieve them.
12.	3.15.	The Committee are unhappy at the scaling down of the target of cumulative production of crude by 1970-71 in the public sector from 22.50

(1)	(2)	(3)
		million tonnes to 19.2 million tonnes and the rate of annual production from 6.50 million tonnes to 6.23 million tonnes in 1970-71. In view of the annual requirements of 20-22 million tonnes of crude for various refineries in the country by 1970-71 and the anticipated gap of about 11 million tonnes between requirements and indigenous supply, they cannot but consider this reduction in the targets as unfortunate. It is hoped that Government would spare no efforts to reduce this gap as much as possible by determined efforts to increase the output of indigenous crude. The Committee would therefore strongly emphasise the imperative need of upward revision of targets of crude production in the country by intensifying exploration, prospecting and development efforts in this field.
13.	3.18	The Committee note that Government have not prepared any long term perspective plan for the indigenous production of crude. While conceding that there may be difficulties in the preparation of such a plan, it is nevertheless desirable that Government should have a broad idea of the long term objective in this field for which a plan of action should be prepared well in advance. Considering the heavy outgo of foreign exchange on crude imports which is estimated at Rs. 110 crores annually by 1970-71, it is all the more essential for Government to aim at self-sufficiency in crude production which call for long term planning for extensive and intensive geophysical and geological surveys and exploratory drilling etc. The Committee therefore strongly urge that Government should prepare a perspective plan covering a period of 15 to 20 years which should aim at maximising indigenous production of crude so as to reduce crude imports to the minimum. As exploration and prodction of crude is a long process and is full of uncertainties, the need for a perspective plan becomes all the more greater.

(1)	(2)	(3)
		The Committee recommend that immediate action should be taken by Government towards this end.
14.	3.25.	The Committee note that while the Oil India Limited and the Oil and Natural Gas Commission have established crude reserves of almost the same level in the Eastern Zone their annual rates of production *viz.* 3 million and 1.5 million tonnes respectively vary widely. The Committee are are unable to understand why the production of crude per year by the Oil and Natural Gas Commission should be only half of the Oil India Limited. They feel that with more vigorous efforts it should be possible to improve production of crude in the Rudrasagar and Lakwa fields. The Committee understand that the crude requirements of the Haldia refinery and the third million tonne requirements of the Barauni refinery are proposed to be met by imports. The Committee consider that having established sufficient proved and indicated oil reserves in the Eastern Zone of the country, it should be Government's endeavour to meet the full crude requirements not only of the Barauni refinery but of the Halidia refinery also from indigenous sources. They, therefore, emphasise the imperative need to intensify commercial production of crude from the Rudrasagar and Lakwa fields of the Oil and Natural Gas Commission, so as to meet the crude requirements of Barauni and Haldia refineries from these sources, as soon as possible. At the same time the Committee would also like the Government to study and examine the question of transporting this crude to these consuming centres.
15	4.10	The Committee note the phenomenal increase in the quantity of petroleum products produced in the private sector. From a small beginning of .25

(1)	(2)	(3)
		million tonnes at the start of the First Plan, the petroleum products increased to 3.9 million tonnes by the end of the Plan period and thereafter registered an increase of about 200 per cent by the end of the Third Plan. Out of the total indigenous production of about 11.5 million tonnes of petroleum products in the country in 1966-67, the share of private sector was about 8 million tonnes *i.e.* about 70 per cent. This has not only helped in meeting the P.O.L. requirements of the country indigenously but has resulted in considerable saving of foreign exchange which would otherwise have to be spent in importing refined products which are costlier than the imported crude.
16	4.20 4.21	The Committee regret to observe that there have been shortfalls in production of the public sector refineries since 1962 when the first refinery at Gauhati went on stream. They note that these shortfalls have been attributed to initial delays in the completion of the different units of the refineries as a result of which the main units of the plants could not be operated uninterrupted, and also that there have been teething troubles with all these refineries. The Committee regret that there have been defaults and delays on the part of the foreign collaborators also and that in the case of Gujarat refineries the shortfalls have been mainly due to the problems of disposal of the by-products of the refinery.
		4.21 The Committee have no doubt that Government would profit by the experience gained in the setting up of the three refineries at Gauhati, Barauni and Gujarat and would take timely measures to ensure that the Madras and Haldia refineries are commissioned on schedule and start production according to their rated capacity as early as possible.

(1)	(2)	(3)
17.	4.25	In view of the unsatisfactory performance of the public sector refineries in the past, the Committee would like the Government to take all necessary steps to ensure that the production targets laid down for each refinery in the public sector are adhered to in actual practice.
18	4.32 4.33	The Committee are unhappy about the losses suffered by the Gujarat refinery on account of less offtake of L.S.H.S. by Dhuvaran Power House, which restricted the refinery's crude throughput for a long time resulting in considerable loss. The Committee are surprised to note that there is no penalty clause in the agreement between the refinery and Gujarat State Electricity Board regarding the supply of L.S.H.S. to the Dhuvaran Power House. It may be that the penalty clause would not have been operative in the present case which is stated to be 'Force Majeure' but what is surprising is that in this particular case, the question of insertion of a penalty clause was not at all considered. The Committee suggest that in such cases Government should consider that feasibility of including a penalty clause for failure of the party to carry out its obligation made in the contract.
19.	4.39 to 4.41	The Committee learn with concern that expansion of the refineries in the private sector was carried out without the approval of Government inasmuch as Government's permission was not sought for capital investment for this purpose. The Committee are doubtful that the capacity of the refineries can be increased to about two times with minor modifications and improvements only unless the additional capacity was contemplated and built into the original plant and equipment itself. The Committee cannot help concluding that Government had not taken sufficient care in

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		the begining to check over-designing of capacities of refineries in the private sector. What the Committee feel more concerned about is that even now the existing machinery and arrangement for exercising checks regarding overdesigning of plants are not fool proof as admitted by the Secretary to the Ministry during evidence. This is a serious matter as the very purpose of licensing and regulation of industries is vitiated by such irregular expansions and the Government is at times faced with a *fait acompli*.
		The Committee, therefore, strongly recommend that Government shrould immediately evolve a suitable machinery to ensure that no industrial unit is able to increase its licensed capacity in this manner without prior approval of the Government.
20	4.45	The Committee are constrained to observe that while the private sector refineries appear to have been originally designed with additional inbuilt capacities which were later on expanded with very little cost, no such inbuilt capacities were provided in the public sector refineries with the result that their capacities are now being increased at considerable additional costs. The Committee urge that in designing the Madras and Haldia refineries, this aspect will be kept in view. The Committee would further suggest that the feasibility of maximising the output from the existing refineries by changes in processes, may be examined. They hope that continuous attention would be paid to evplore possibilities of applying new developments in petroleum refining to the existing processes, with a view to increase the refinery throughput as much as possible.
21	4.54 to 4.56.	The Committee observe that the refinery capacity in the country is not evenly distributed among the different zones of the country with the result that the products of the refineries are

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		being sent to far off areas at considerable cost. The Committee further note that there is heavy concentration of refining capacity in Bombay. They understand that the present trend in other countries is to locate refineries near the consuming centres. With rapid industrialisation in the country, industry will expand from coast to the interior of the country. There is thus a case for locating future refineries in the interior which would give a boost to the industrial development of those areas. The Committee therefore recommend that before selecting the location of a refinery or for allowing expansion, Government should take into account factors like the level of consumption, the need for reducing the disparities in the levels of development between different regions, the strain on the transportation system, avoidance of over-crowding of particular areas etc. They hope that the location of the proposed refinery in the North West region would be decided in accordance with these considerations. The Committee welcome Government's decision not to permit expansion of the Bombay refineries. In the opinion of the Committee any further expansion of these refineries is *inter alia* likely to result in: (i) over-concentration in Bombay area, (ii) putting greater strain on the transport system of the country in moving the products. (iii) repatriation of more profits by these refineries in foreign exchange. (iv) import of more crude from their own sources.
22	4.64 to 4.66	The Committee are unhappy about the imbalance between the production and consumption

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		of certain petroleum products in the country, necessitating imports and exports of some products. The Committe realise that the products pattern of a refinery is largely determined by the type of crude used. Even so there is scope for flexibility as is evident by the product pattern of Digboi refinery which uses the same crude as the Gauhati and Barauni refineries but produces a much widerrange of products. They recommend that a detailed review of the product pattern of all the refineries in the country may be carried out with a view to assessing the possibility of reducing imbalance in demand and supply through alteration in the product pattern. The Committee would also like Government to undertake continuous planning to meet the changing market requirements indigenously so as to reduce the imbalance to the minimum in the Fourth Plan period and to eliminate it altogether soon thereafter. The Committee are also unable to understand why the public sector refineries at Gauhati and Barauni produce fewer items compared to private sector refinery at Digboi although all of them process the same crude. The Committe, therefore, stress the need to diversify the product pattern of the public sector refineries, which would not only improve their product realisation but increase their refinery margins also.
23	4.72	The Committee are constrained to observe that the country is still deficient in kerosene production and had to import about 20% of its requirements in 1967 at a cost of about Rs. 8 crores. The Committee note that Government expects the country to be self-sufficient in kerosene by 1970-71 when Haldia refinery is scheduled to be commisioned. The Committee would like to

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		point out that with rapidly rising population, increasing rural incomes and urbanisation, the demand for kerosene as an illuminant and cooking fuel is bound to increase. It is, therefore, essential that effective steps are taken for increasing the production of this fuel as early as possible. The Committee strongly urge that Government should take concerted measures for timely completion of the Haldia refinery. Simultaneously it is necessary to maximise the recovery of kerosene distillate fractions from crude oil being processed in other refineries to meet the growing demand of ths product. The Comittee recommend that Government should investigate the possibilities of achieving this objective by introducing advanced technological processes in the refining of crude oil in the existing refineries.
24	4.77 to 4.79	The Committee are happy to note the introduction of INDANE into the market by I.O.C. They hope that with the completion of Madras and Haldia refineries, the production of LPG will be adequate to meet the demand for this product to a considerable extent.
		While regretting that LPG was not included in the original product pattern of the Cochin refinery, the Committee are happy to note that a project report for the production of LPG at this refinery is also under examination by its Board of Directors. They hope that an early decision will be taken in the matter and no time will be lost in starting its production.
		The Committee would like to emphasise that the availability of LPG would minimise the use of kerosene and other fuels which are in short supply in the country. They would urge that Government should give increasing importance to the production of LPG in the refineries and the development of other fuels like town gas which would relieve the pressure on kerosene.

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25	4.84 to 4.85	The Committee regret to note that almost the entire demand for lubricating oils in the country is being met so far through imports and that it would continue to be so to a considerable extent till 1971. They consider it unfortunate that this item, so essential for the wheels of the industry, was listed as a category 'D' project in the outline of the Third Plan with the result that the preparation of the project reports for this item was not authorised till May, 1961. Since the setting up of lubricating oil plants in the country has been badly delayed and lubricants continue to be imported at an average cost of more than Rs. 15 crores per year, the Committee cannot too strongly stress upon the Government the necessity for ensuring that all the proposed projects for the production of lubricating oils in the country are completed in time so that valuable foreign exchange, may not be spent on their imports after 1971.
26	4.86	The Committee would further like the Government to keep the estimates of demand for lubricants under constant review and take timely measures to set up additional capacity to meet the increased demand.
27	4.87	The Committee would also suggest that the feasibility of reducing the number of grades of lubricants to the minimum may be examined as that would help in reducing cost and improving efficiency.
28.	4.92 to 4.95	The Committee are deeply concerned about upward revisions in the cost estimates of the lube project which have gone up from Rs. 5.89 crores to Rs. 14.40 crores. What is more disturbing is that Government are unable to guarantee that there will not be any further upward revision of the cost estimates. The Committee are surprised that this matter involving about 250

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		per cent increase in the cost estimates of the project had not even been brought before the Cabinet for their approval. The Committee note that a number of items were omitted to be included in the original estimates. They recommend that a thorough enquiry by experts should be conducted into the reasons for these omissions so as to fix responsibility therefor. The Committee further recommend that such steep rises in the estimates should be got approved by the Cabinet. The Committee are also unhappy to note that while more than a million dollars are to be paid by way of interest charges for the pre-start up period, the agreement does not provide for any liability for the delay on the part of the parties concerned. In this connection they note that there has been further increase in expenditure on account of the extension of work schedule and date of the completion (by nine months). The Committee cannot but conclude that due care in drawing up the agreement to safeguard the interests of the Government, which could have been taken, was not taken.
29.	4.101	The Committee are happy to note that the Indian Institute of Petroleum, Research Designs and Standards Organisation, Ministry of Railways and Defence Research Laboratory (Materials), Kanpur have successfully evolved methods for reclamation of used lubricating oils. Since lubricating oils are a deficit item in the country being imported at an average cost of Rs. 15 crores per year, the Committee strongly urge that the Government should expedite commercial exploitation of the process evolved by the above research organisations so that at least a part of the demand for lubricating oils is met from the

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		used lubricating oils reclaimed in the country. While the Committee agree that cost of collection of used lubricating oils from over a large area tends to make the process uneconomical, they feel that it would not be uneconomical to establish such plants near the major industrial complexes in the country. Apart from saving in freight charges such a step will lead to ready availability of the lubricants so essential for the industrial machinery.
30.	5.12	The Committee are concerned to note that though the private sector refineries had started processing of imported crude from 1954 onwards, no discounts on account of purchase of imported crude were allowed by them till June, 1960. According to the agreements with these refineries the purchases of the crude are to be made by them at world market prices for which foreign exchange is made available by Government. It was, therefore, the duty of the Ministry to ensure that the prices charged by these refineries for the import of crude were the real market prices. As the giving of discounts is a normal practice in the oil market, it is unfortunate that the Ministry did not keep itself posted with the latest price trends in the world oil market and did not press the refineries to allow the available discounts resulting in avoidable outgo of scarce foreign exchange. The Committee are unable to understand why even now, the rates of discount allowed by the coastal refineries are less than the minimum discounts recommended by the Working Group on Oil Prices. It appears that Government are still unaware of the latest price trends in world oil markets and rates of discounts available. As the number of refineries based on imported crude is increasing and there are no immediate prospects

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		of meeting the requirements of the refineries from indigenous crude, the Committee recommend that Government should take immediate measures to collect uptodate information on the trend of oil prices in the world market including the discounts available from time to time and insist on the oil refineries to allow maximum discounts. In case the refineries are unwilling to do so, Government should not hesitate to make arrangements to procure their requirements of crude from the cheapest available source. Since the Indian Oil Corporation has already gained experience in importing petroleum products, it should not be difficult for them to arrange for the import of crude for the coastal refineries and to keep themselves posted with the latest price trends in world market. Considering the heavy imports of crude oil which are estimated at about Rs. 110 crores per annum by 1970-71, it is necessary to secure the maximum price advantage in the import of crude oil as the price reduction of a few cents per barrel would result in saving considerable foreign exchange.
31.	5.13	The Committee further note that one of the reasons for the cheapness of the crude imported by the Cochin refinery is that they have made a tanker contract for transportation of crude at more favourable rates. There is a difference of over Rs. 5 per ton in the freight paid by Cochin refineries which is Rs. 11.12 compared to Rs. 17.6 by Burmah Shell and about Rs. 17 per ton by the ESSO refineries. Calculating on the average saving of Rs. 5 per ton on freight, the annual saving on the import of over 6 million tonnes of crude by the Bombay refineries would amount to about Rs. 3 crores in foreign exchange. The Committee see no reason why the Bombay refineries cannot be asked to make similar arrangements for the transport of their crude as have been made by the Cochin refineries.

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32.	5.14	The Committee cannot over-emphasise the need for bringing down the prices of the imported crude as these have a very important effect on the price of petroleum products. The Committee therefore recommend that immediate action should be taken by Government to secure the maximum discounts on imported crude and cheapest tanker freight rates.
33.	5.24	The Committee agree that in pricing the indigenous crude a measure of protection is desirable. At the same time, it is necessary that the O.N.G.C. and Oil India should work efficiently and economically so as to keep down the cost of production of indigenous crude to the maximum extent possible. The Committee note that at present the indigenous crude is priced at import parity which includes ocean freight, insurance, ocean losses, wharfage and landing charges. Besides, devaluation has resulted in further increasing the price of imported crude by over 58 per cent. It is therefore a matter for consideration what should be the extent of protection which should be given to the indigenous crude, with particular reference to the conditions prevailing for the exploration and exploitation of oil in the country and the need for efficiency and economy in the working of the O.N.G.C. and Oil India. The Committee therefore recommend that the Government should re-examine the question of linking the price of indigenous crudes with that of the equivalent quality of imported crude. For this purpose a committee consisting of experts in petroleum technology, costing and financial matters should be appointed to review the whole basis of pricing of indigenous crude—i.e. whether it should be import parity or cost plus basis or any other suitable basis. In particular, the question of inclusion of cost elements like ocean freight, ocean loss, insurance, wharfage

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		etc. which are merely notional for the purpose of computing import parity price, should be fully examined.
34.	5.25	The Committee are surprised that no uniform procedure is followed by the O.N.G.C. and Oil India in calculating their production costs. They regret that Government who are also 50 per cent partner in the Oil India Ltd. had not looked to the aspect of laying down a common costing pattern for both the organisations which would have facilitated comparison of their respective performances. The Committee however note that the matter is now under examination of the Government. The Committee recommend that a uniform procedure for collection, analysis and compilation of costs by both these organisations should be laid down without further delay.
35.	5.48	The Committee note that Government have made adjustments in the rates of basic (recoverable and additional/non-recoverable duties) consequent on devaluation so as to keep the refinery economics pre and post devaluation on an even keel. They however find that the total net relief given to the refineries as a result of these adjustments to compensate them on account of extra cost, due to increase in the cost of imported and or indigenous crude, imported chemicals and equipment etc. as a result of devaluation, ranges between Rs. 8.19 per kilolitre in the case of motor spirit and Rs. 74.28 per metric tonne in the case of Bitumen cutbacks. In the case of kerosene superior, the net relief to the refineries is Rs. 36.50 per kilolitre. The Commitee are doubtful if the reliefs provided in all these cases are justified. Since the pricing of petroleum products is a complicated matter and has been further complicated by the devaluation of the rupee, the Committee recommend that the question of pricing of refinery products should also

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		be gone into thoroughly by the committee of experts suggested by them in para 5.24.
36.	5.52	The Committee regret to note that the prices of petroleum products like gasoline and kerosene are much higher in India as compared to other countries like U.S.A., U.K., Pakistan, Japan, Burma, Australia and Ceylon. They are surprised that Government are not aware of the basis of pricing of petroleum products in other countries. The Committee recommend that the Government should study the pricing pattern of petroleum products in other countries particularly neighbouring countries so as to find out the reasons for the high prices of petroleum products in the country and devise measures to reduce the same.
37.	5.56	The Committee are unhappy to learn about the large scale misuse of kerosene as fuel in lorries and buses because of the price difference between kerosene and H.S.D. on account of a heavier rate of excise duty on the latter. Apart from the loss of revenue to Government caused by its misuse kerosene is also a deficit product being imported at present and is an article of daily use for the common man. The Committee would, therefore, strongly emphasise the need to take effective measures to stop the misuse of kerosene as fuel from automotion. They hope that it would soon be possible for the Government to use chemical markers in kerosene to avoid its adulteration with H.S.D.
38.	5.67	The Committee regret to note that the emergence of the Indian Oil Corporation and the public sector refineries has not been able to make any impact on the price of petroleum products in the country as import parity has been the basis of pricing. According to Government, the position would not change so long as the principle of import parity continues to

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		be applied. In the opinion of the Committee this principle of import parity, apart from standing in the way of bringing down the prices of petroleum products, has resulted in under-recoveries of freight to the tune of about Rs. 2.29 crores during the last two years by the Indian Oil Corporation. It appears that the present system of import parity is more disadvantageous to the Indian Oil Corporation that to the private sector refineries as the figures under-recoveries by the private sector refineries were not made available to the Committee presumably because they were not quite comparable with those of the I.O.C. Further the present basis of pricing on import parity is anomalous as the price of petroleum products is more at Barauni *i.e.* the producing centre than at Calcutta as has been forcefully pointed out by the Committee on Public Undertakings in paras 79 and 82 of their 35th Report (Third Lok Sabha) on I.O.C. (Marketing Division). The Committee share the views of the Committee on Public Undertakings in this regard and recommend that Government should expeditiously find a way out of the anomalies pointed out by the Committee on Public Undertakings. The Committee consider that the refinery agreements with the coastal refineries snould not stand in the way of any solution to this problem as the throughput of the coastal refineries has been more than doubled since the conclusion of these agreements in 1951, and the original clause in this regard could at best be applicable to the original capacity.
39.	5.75	The Committee are unhappy to note that the refining costs per tonne of the public sector refineries do not compare favourably with the corresponding costs of the private sector refineries. While this may partly be due to the higher capital costs of the public sector refineries, there is

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		enough scope for improvements in this regard. The Committee, therefore, emphasise upon the Government the need to reduce the operational costs of the refineries in the public sector and for this purpose they consider it rather essential that a periodical examination of the costs of production of these refineries should be conducted by an outside agency *i.e.* other than Indian Oil Corporation.
40.	5.78	The Committee are glad to note that the refinery margins of the public sector refineries compare favourably with the refinery margins/processing fee in the case of private sector refineries.
41.	5.89	The Committee are not convinced by the reasons advanced by Government for not associating persons acquainted with the petroleum industry with the two committees set up to advise them on petroleum prices in the country. They feel that the appointment of persons having an intimate knowledge of petroleum industry and of its marketing techniques would have been of distinct advantage particularly as the petroleum industry is a very complicated industry and has world wide ramifications. It is well known that international oil cartels operate in this industry and influence product prices. The Committee have recommended the appointment of an expert committee to go into the question of fixation of prices of indigenous crude and petroleum products in paras 5.24 and 5.48 of this report. They hope that earnest consideration would be given to the selection of competent men in appointing this expert committee.
42.	6.6	The Committee are perturbed at the ever increasing import bill for crude. They note that the gap between the indigenous production of crude and its total requirements would continue to widen in the coming years resulting in an in-

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		creasing outflow of precious foreign exchange. The Committee realise that import of crude for processing in the country is more economical than the import of finished petroleum products particularly the requirements of petroleum products are ever increasing. The Committee, therefore, re-emphasise the urgent need for increasing the indigenous production of crude at a faster rate to reduce the foreign exchange drain as much as possible.
43.	6.7	The Committee would also like the Government to explore the possibility of importing the entire crude requirements of the country through a single agency *viz.* the I.O.C. as that would result in substantial economy because of the large scale bulk purchases involved. They hope that in the interest of reducing the drain on the foreign exchange resources of the country Government would make every effort to pursuade the oil companies to agree to the modification of their agreements to give up their rights of importing crude from their own sources.
44.	6.16	The Committee have already commented upon the delay in setting up of lubricating oil plants in the country as a result of which the demand for this product had to be met almost entirely through imports involving huge amounts of foreign exchange. The Committee are unhappy to note that lubricating oils will continue to be imported throughout the Fourth Plan period at an average rate of 3.5 lakh tonnes per year costing over Rs. 25 crores a year. In view of the heavy amounts of foreign exchange involved in the imports, the Committee cannot over emphasise the need to channelise the imports of lubricants through the I.O.C. which as the sole importer of bulk quantities. would be in a much better position to purchase them at the most competitive prices.

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45.	6.20	While the Committee regret that kerosene will continue to be imported even during the Fourth Plan period, they are happy to note that this product is imported through one organisation only *viz.* the I.O.C. The Committee hope that the Government will make every effort to see that the country attains self-sufficiency in kerosene positively by the end of the Fourth Plan period and that there will not be any need to import this product thereafter. In this connection the Committee would also refer to their earlier recommendation in para 4.72 on this subject.
46.	6.30	The Committee note that the country has at present an exportable surplus of motor spirit/naphtha, high speed diesel, furnace oil. They are glad that paraffin wax produced at the Digboi refinery is being exported to various countries all over the world.
47	6.31	The Committee note that there is a glut in motor spirit supplies at Singapore practically blocking the disposal in this market as a result of which the oil companies have been forced to export naphtha and 'unleaded' motor spirit which are stated to fetch much lower price. The Committee, therefore, urge the Government to make intensified efforts through the State Trading Corporation and otherwise to explore alternate markets for motor spirit, as the exportable surplus of this product is likely to increase in the coming years with the commissioning of Madras and Haldia refineries and the expansion of Barauni and Gujarat refineries.
48.	6.33	The Committee are unable to appreciate why Government have not made any special efforts to increase the export potentialities of petroleum products of the country's refineries. In view of the rapid increase in the refining capacity envisaged in the Fourth Plan period, the Committee

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		strongly stress the need for ascertaining the export potentiality of the surplus items that would be coming out of the refineries. Since Government are stated to be constantly reviewing the product pattern of all the refineries, the Committee would like the Government to keep this aspect also in view so as to suggest such changes in specifications of the products as would help them in finding ready foreign markets.
49	7.13	The Committee regret to observe that even though Government realise the need to modify the agreements with the oil refineries, particularly with regard to their right to import crude from their own sources, and the right to establish product prices on import parity basis, they have not yet been able to do so. The Committee are unable to understand why the Government did not avail themselves of the opportunity to modify the agreements when the oil companies approached them for permission to operate beyond their original licensed capacities from time to time. It is really surprising that the oil companies could go back from the understanding in regard to the modification of these agreements, particularly when viewed against the following background: (i) the refineries expanded their capacities to over 100 per cent, without obtaining any prior approval of Government which enables them to import larger quantities of crude, (ii) these expansions in the capacities have resulted in large scale coastal movements of petroleum products in foreign tankers involving substantial expenditure of foreign exchange on freight.
50	7.14	A view can also be taken that the original agreements giving the coastal refineries the right

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		to import crude from their own sources, should appropriately relate to the original capacities of these refineries. For the expanded capacity, it should be possible for Government to make the refineries agree to the imports of crude through Government at the best possible prices. This assumes importance in view of the continuing foreign exchange difficulties experienced by the country and the need to save as much free foreign exchange as possible. The Committee have no doubt that Government should be able to bring about suitable modifications in these agreements with the consent of the oil refineries. They hope that in the larger public interest Government will be able to negotiate the modification of the refinery agreements in respect of import of crude and fixation of prices of petroleum products on import parity.
51.	7.23	It is unfortunate that the foreign oil companies reduced the production of fuel oil following the closure of Suez Canal which, as has been admitted, had caused some difficulties in the country, especially in meeting the requirements of the International Bunkers'. While the Committee appreciate the role of IOC which rose to the occasion in meeting the demand for fuel oil in the country, they feel that Government should not have allowed the oil companies to change their production pattern to suit their own business interests to the detriment of the Nation's. The Committee recommend that Government should not hesitate to use their powers regarding determination of the production pattern of the oil companies in the larger public interests in future.
52.	7.26	The Committee are surprised that M/s. Duncan Brothers were allowed 2 per cent equity participation simply because they brought M/s. Phillips to the negotiation table and were their associates during the negotiations.

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53.	7.32 7.33	The Committee regret to observe the steep increase in the cost estimates of the refinery from the original Rs. 19.85 crores to the anticipated Rs. 28 crores. They note that an increase of over Rs. 3 crores is directly attributable to the change in the site of the refinery necessitating, in addition to the payment for the land, payments of Rs. 143.86 lakhs for a pipeline from the shore to the Refinery and Rs. 115.57 lakhs for a private railway siding. The Committee need hardly emphasise that the estimates of costs should be prepared after selection of site and should be more realistic.
54.	7.41	The Committee are deeply concerned about the foreign exchange outgo during the next fifteen years on account of technical services fee for services and research outside India amounting to about Rs. 4.2 crores. They also note that in addition to this, the payments received in rupees for services in India which would amount to about Rs. 2.36 crores during the nine years may also be converted into foreign currency and can be taken out of the country. The Committee feel that these payments together with the share of M/s. Phillips in the process margin of the refinery will result in a substantial foreign exchange drain, not commensurate with the benefits to the refinery.
55.	7.52 7.53	The Committee are unhappy about the present arrangements for the supply of crude to the Cochin refinery whereby a minority partner to the contract has been appointed agent for the purchase of imported crude. They feel concerned about the fact that while the Government believe that it is possible to get crude at a cheaper rate they cannot do anything in this matter till 1970, upto when the present contract for the supply of crude is stated to be binding, more so, when it is estimated that every reduction of

(1)	(2)	(3)
		$0.01 per barrel would mean a saving of about Rs. 13.5 lakhs to 15 lakhs in foreign exchange per year to the refinery. The Commitee, therefore, strongly impress upon the Government the need to make an alternate arrangement for the supply of crude as soon as the period of the present contract is over and also in the meanwhile to seek through negotiations on a reduction in the price of crude supplied to the Cochin refinery.
56.	7.69	The Committee consider the provision for the guaranteed process margin payable to Cochin refinery as a distinctly disadvantageous feature of the Agreement which cannot be justified by the "desire of the Government to reach an agreement." In their opinion the process margin which now works out to about Rs. 80 per ton (post devaluation) and was about Rs. 50 per ton even in 1963 (pre-devaluation) when the agreement was entered into, is very high. The Committee feel that such a high guaranteed process margin will act as a disincentive to the company to make any effort to economise and to reduce their refining costs. This is borne out by the fact that while the refining costs in Gauhati and Gujarat Refineries are below Rs. 30 per ton (which are also higher than those of the private sector refineries), the refining cost of the Cochin Refinery are stated to have been budgetted at Rs. 55 per ton during 1967-68. In fact payment to the tune of Rs. 56,51,000 has to be made to the Cochin Refineries Ltd. on account of the shortfall in process margin in respect of the period from 26th May, 1967 to 31st August, 1967 for 3 months only. Thus the refining costs of this refinery are already higher by 100 per cent compared to the other refineries. The Committee further regret to note that there is no option with the Government to seek any change regarding the provision for process margin as is pos-

(1)	(2)	(3)
		sible in the case of the supply of crude to the refinery where in 1970 the contract for the same is to be renewed.
57.	7.70 7.71	The Committee also do not appreciate the fact that the process margin has been indicated in terms of the currency of the country of the minority partner because of their insistence for the same. The Committee, therefore, strongly urge the Government not to accept such unusual terms in their future contracts. Further there should be a provision in the contracts for periodical review of the terms so that the Government may have the option to modify the terms of a contract found to be disadvantageous subsequently. The Committee also recommend that all financial provisions in the contracts should invariably be expressed in Indian currency.
58	7.76 7.77	The Committee are not convinced of the usefulness of the clause 8.2 relating to exports in the contract which, as has been admitted by the Government, is of an abstruse nature. It also appears to the Committee that perhaps M/s. Phillips Petroleum have not made any genuine efforts to find a foreign market for the refinery's surplus products. The Committee urge that Government should couch the clauses of such contracts in more definite terms. As regards the disposal of the surplus products of this refinery, the Committee are of the opinion that the Cochin Refinery Limited should not bank upon the efforts of M/s. Phillips to find foreign markets and should continue to explore foreign markets for this refinery's surplus products through the agencies of IOC/STC.
59.	7.79	The Committee have commented on the various clauses of this agreement *viz.* those relating to the import of crude, payments of technical

(1)	(2)	(3)
		fees to the foreign collaborators and payment of process margin. They feel that notwithstanding the foreign exchange that has been arranged by the foreign collaborators for this Refinery the agreement is disadvantageous from an overall point of view. In the opinion of the Committee Government have not been vigilant enough in weighing the advantages and disadvantages of the various clauses in this agreement. They would like that before entering into such agreements, in future Government should scrutinise them very carefully.
60.	7.87 7.88	The Committee consider the Agreement for the setting up of the Madras Refinery as a definite improvement over the Agreement of the setting up of the Cochin Refinery inasmuch as the price and source of the supply of crude to this refinery has been fixed in definite terms and that the Managing Director of the New Company is a nominee of the Government of India in this case. They are also happy to note that the foreign exchange content of the cost estimates of this project is also much less than that of Cochin Refinery. The Committee are, however, unable to appreciate why the Indian Oil Corporation which is responsible for running three public sector refineries has not been the Indian partner to this Agreement. They are glad to note that Haldia refinery has now been entrusted to the Indian Oil Corporation. They hope that this trend will be continued in future.
61.	7.94	While the Committee appreciate that services of the Engineers India Limited have been utilised to some extent for the construction of the Madras refinery they are unhappy to note that services of these Indian Engineers who were associated with the Russians in the construction

(1)	(2)	(3)
		of Koyali Refinery had not been utilised for the construction of the Cochin Refinery because the circumstances there were stated to be 'different'. This may perhaps be due to the Cochin refinery having been constructed as a turn key job by M/s. Phillips. The Committee, however, hope that the Government will fully utilise indigenous know-how in all such future projects.
62.	7.103	The Committee are not happy to note that even in the case of Haldia Refinery which is stated to be 'a wholly Government owned refinery' the Government had to commit themselves for the import of crude from France for 50 per cent of the crude requirements of the refinery as the French credit is tied with such a condition. The Committee hope that at the end of the five or six years as stipulated in the agreement the Government will be able to procure all the crude requirements of the refinery themselves.
63.	7.104	The Committee are happy to note that the services of the Engineers India Ltd. will be utilised to the fullest extent possible in the design, construction and erection of this refinery and also that the work regarding implementation of this project has been entrusted to the Indian Oil Corporation.
64.	8.16	The Committee are glad at the emergence of IOC (Marketing Division) as a major distributor of petroleum products in the country. Apart from undertaking distribution of petroleum products in difficult and sensitive areas of the country, it has helped in reducing the repatriable profits of the foreign oil distribution companies. Since the IOC has to market all the products of the public sector refineries and most of the imported petroleum products, it is necessary that advance plans are made to gear up the IOC to

(1)	(2)	(3)
		undertake its responsibility of handling additional products of the public sector refineries in future years. The Committee note that by the end of 1970-71 the refining capacity in the public sector is likely to be of the order of 13-14 million tonnes. Compared to its present operations amounting to about 4 million tonnes of petroleum products in 1966-67 the IOC would have to be geared to handle about 300 per cent more petroleum products within the next 3-4 years. The Committee would therefore like the Government to ensure that the IOC is enabled to handle all the petroleum products of public sector refineries in future smoothly and efficiently
65.	8.17	The Committee are unhappy that IOC—the biggest marketing unit for the petroleum products, has not been effective in bringing about a reduction in the prices of petroleum products because of the 'import parity' basis of pricing. While reiterating the need for a change in the present pricing policy, the Committee would like the prices of petroleum products to be made cheaper to the consumers by effecting economy in the marketing and distribution expenses by the marketing companies.
66.	8.25	The Committee note that no revision has been made of the various supply areas which were settled when petroleum products were wholly imported. It is surprising that the Government do not envisage any redistribution of these areas as according to them, the present arrangement was there because of certain requirements of the refinery agreements. The Committee feel that the position as regards the indigenous availability of petroleum products has totally changed in the last decade with the setting up of public sector refineries and the country is now self-sufficient in petroleum products except for kerosene, lubricants and A.T.F.

(1)	(2)	(3)
		It is time that the benefit of the location of the inland refineries should be felt by the consumers in the adjacent areas also. The Committee, therefore, strongly emphasise that these supply areas should be redemarcated taking into account the location of the refineries and the need to make the products cheaper to the inland areas. The existence of the agreements with the coastal refineries should not be allowed to perpetuate the anomalies inherent in the present system.
67.	8.34	The Committee note that there has not been any revision in the kerosene quotas for the States since 1st October, 1966 and that the same is proposed to be undertaken in May or June, 1968. From the quotas allotted to the various States in October, 1966, the Committee note that there are wide disparities between the various States. The allotment to the coastal States, particularly to Maharashtra, West Bengal, Madras are much higher than to the more populous upcountry States or that warranted on their population basis. In the opinion of the Committee this may partly be due to the present system of supply areas and import parity pricing. Since kerosene is an essential commodity for the common man whether in the villages or the cities, the Committee strongly urge the Government to suitably revise the kerosene quotas of the various States with particular reference to the population factor so that no hardship is experienced by the common man in the interior which is normally the case now.
68.	8.35	The Committee note that distribution of kerosene is primarily the responsibility of the State Governments. Nevertheless it is the duty of the distributing companies to ensure that there are no malpractices in the distribution of this commodity by their agents. The Commit-

(1)	(2)	(3)
		tee urge that the Government, in consultation with the State Governments, should ensure that no inconvenience is felt by the people even in the remotest areas of the country in getting their supplies of kerosene which is an essential commodity of daily use.
69.	8.49	The Committee are happy to note the views of the Government regarding the necessity for regulation of retail outlets for petroleum products. The Committee fully agree with the view of the Retail Outlets Committee that a more equitable relationship between the products availability with the individual oil companies and their access to the retail outlets is to be brought about for decreasing the sales of Indian Oil Corporation's products through the retail outlets of the foreign oil companies which adds to the amounts of profits repatriated by these oil companies. The Committee are happy that Government have decided to accept and adopt all the recommendations made by the Retail Outlets Committee. They hope that Government will take immediate action towards implementation of the recommendations of the Retail Outlets Committee.
70.	8.50	The Committee would also like the Government to take early measures for splitting up of the agencies where there is a concentration of outlets in their hands, as that would lead to better service to the consumers and a lesser possibility of creating artificial local shortages of essential products like kerosene
71.	8.51	As regards distribution of products in the interior and remote areas, the Committee suggest that the Government should render all possible help to encourage the farmers' cooperatives to undertake operation of retail outlets, as the investments involved in a retail outlet are beyond the reach of a common man in the rural areas.

(1)	(2)	(3)
72.	9.6	The Committee regret to observe that inspite of the recommendations made by the Oil Prices Enquiry Committee in 1961 and the Working Group on Oil Prices in 1965, heavy payments, amounting to approximately Rs. 1·6 crores are being made annually to their overesas offices by the various oil companies on account of services rendered. The payments made by the Burmah Shell and ESSO on this account are very heavy. The Committee see no justification for the payment of such heavy expenses. They are not convinced that such heavy payments are covered by the agreements concluded with these refineries. The Committee recommend that Government should take effective measures to drastically reduce payments on this account which would result in saving of foreign exchange considerably.
73.	9.12 9.13	In the absence of a detailed break up of the total remittanees, the Committee are unable to comment on the need or otherwise of the heavy remittances totalling over Rs. 394 crores made by the oil companies since 1962. The Committee are rather surprised to note that Burmah Shell Refineries Ltd. alone remitted profits to the tune of over Rs. 30 crores upto 1966 while their foreign capital invesctment is stated to be about Rs. 14·53 crores only. They also note with concern that information regarding profits retained in this country by the foreign companies for further investment is not available with the Government. It clearly indicated that vital statistics regarding the break up of remittances by the oil companies as also amounts of retained profits are not maintained by Government. The Committee recommend that effective steps should be taken with immediate effect to maintain such important statistics and the foreign oil companies should be persuaded to reduce the quantum of remittances and

(1)	(2)	(3)
		to retain more and more profits earned in this country for further investment.
74.	9.21 to 9.23	The Committee note that there is no direct control by Government over the profit margins of the oil companies as their profits are stated to be regulated through the prices fixed for petroleum products and that there is no ceiling on profits as such.
		The Committee note that the profit margins on account of refining are regulated by the procedure of fixing the prices of petroleum products which are based on import parity. In the opinion of the Committee, this system allows a very high margin of profit to the refineries and also stands in the way of reduction in the prices of petroleum products to the consumers. The Committee have in para 5.52 of this report emphasised the need to bring down the prices of petroleum products.
		The Committee also note that the profits on account of marketing by some companies are more than indicated by the Working Group on Oil Prices. The Committee urge that Government should devise measures so as to keep the margins of profit by these companies to a reasonable level. The Committee recommend that both these aspects should also be examined by the expert committee recommended in para 5.48.
75.	9.29	The Committee are glad to learn that in pursuance of Government's efforts some foreign companies are making arrangements with Indian Insurance Agencies to cover all major insurance risks. They hope that efforts will continue to be made with other companies also to get all their insurance risks covered by the Indian Insurance Agencies.
76.	10.6	The Committee are concerned to note that the Oil Advisory Committee which was set up

(1)	(2)	(3)
		in 1960, with very wide and important terms of reference, has not been functioning properly. While the Committee was originally intended to meet at least once in every three months and should have therefore met 32 times since 1960 it has met only 6 times so far. It is surprising that no meeting of this Committee has been held since April 1966 for want of sufficient material for discussion. They are also unable to understand why the Oil Advisory Committee was at all reconstituted in May, 1967 when no meetings of this Committee were to be held thereafter. The Committee recommend that the whole matter regarding the utility of having an oil advisory commitee should be examined thoroughly by Government and if it is considered essential it should be made to function effectively and play its intended role by calling periodical meetings of this committee.
77.	10.11 10.12	The Committee note that there have been heavy imports of drilling equipment and accessories during the Third Plan period. They regret to learn that because of the difficulties in getting free foreign exchange the best available drilling equipment could not be imported. Since the quality of equipment has a direct bearing on the operational efficiency, the Committee feel that the programme of exploration and production of crude are bound to be adversely affected in the absence of the best possible drilling equipment etc.
		The Committee feel that for accelerating the programme of exploration and exploitation for oil in the country, it is necessary to manufacture drilling and production equipment indigenously. It need hardly be emphasized that for overall progress in this field as well as for effecting savings in foreign exchange, Government should aim at attainment of self sufficiency in equipment as early as

(1)	(2)	(3)
		possible. The Committee, therefore, strongly recommend that effective measures should be taken urgently by Government for the manufacture of drilling equipment as well as refinery equipment in the country. This, the Committee feel, should not be difficult as idle capacity may be available in most of the engineering units and particularly in the Heavy Engineering Corporation, Ranchi which is stated to be already designed for the manufacture of heavy oil drilling rigs.
78.	10.18	The Committee, cannot over emphasise the need to keep to the minimum the capital costs of the refineries as they vitally affect the production costs and ultimately the efficiency of the refineries. They hope that the experience gained in the setting up of the refineries in the public sector would prove of immense benefit in this regard.
79.	10.21	The Committee are constrained to observe that there is no proper coordination between the Oil and Natural Gas Commission and Oil India Limited regarding regular exchange of information about exploration, drilling etc. In the opinion of the Committee the Ministry of Petroleum and Chemicals who are mainly responsible in the matter, should bring about close coordination between these two organisations particularly when the same Joint Secretary of the Ministry is on the Board of Management of both these organisations.
80.	11.5	The Committee recommend that an all out-effort should be made on exploration of oil in the country particularly in areas which have a promising geological strata. Unless such a programme is planned and implemented, the country is likely to be tied eternally to the international market where crude fluctuates from year to year.

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81.	11.6	The Committee are glad that a network of refineries have been set up in the country since independence which meet practically all the demands for petroleum products of the country. Except for kerosene and lubricants, India has achieved self-sufficiency in all other types of petroleum products. With the setting up of Haldia Refinery and the various lubricating plants, India will be self-sufficient in these items also. This progress towards self-sufficiency in petroleum refining is heartening as it has resulted in considerable saving of foreign exchange. It is also a matter of satisfaction that the country is now exporting some petroleum products like High Speed Diesel Oil, Furnace Oil, Motor Gasolene and waxes, etc.
82.	11.7	One of the disquieting features which has particularly struck the Committee is the policy regarding pricing of crude and petroleum products. The Committee have noted that the prices of crude and petroleum products are based on the principle of import parity. It has been stated by Government that this principle is the result of the agreements with the private sector coastal refineries. These coastal refineries have been given the right to import crude from their own sources as also to price the petroleum products on the basis of import parity. The Committee have noted that the prices for the imported crude charged by these refineries have not been the most economic prices as no discount was allowed by these refineries till June, 1960 and even thereafter the full discount as available in the international oil market is not accounted for by them with the result that there is larger outgo of scarce foreign exchange on this account. This pricing of petroleum products on import parity has also created an anomalous position in that petroleum products are cheaper in the coastal areas than the hinterland where public sector refineries are located. This has naturally given rise to com-

1	2	3
		plaints of discrimination especially from States like Assam and Gujarat which produce the crude. While there might have been justification for the adoption of principle of import parity in 1951 when there was practically no refining capacity in the country, the continuance of this principle is open to question after large refining capacities have been set up in the inland areas. The Committee, have (in paras 5.24 & 5.48) therefore recommended the appointment of a committee consisting of experts in petrroleum technology, costing and financial matters to review the whole basis of pricing of crude and petroleum products. They hope that this committee will be able to bring about reduction in the price of crude as well as of petroleum products so that the general public also feels the impact of the birth of the petroleum industry in the country.

APPENDIX VII

(*Vide* Introduction)

Analysis of Recommendations/Conclusions contained in the Report

I. CLASSIFICATION OF RECOMMENDATIONS

A. Recommendations for improving the organisation and working:

S. Nos. 2, 4, 6, 7, 9, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 26, 27, 34; 35; 39, 41, 66, 69, 76 and 79.

B. Recommendations for effecting economy:

S. Nos. 3, 23, 24, 25, 30, 31, 32, 33, 42, 43, 44, 55, 65 and 72.

C. Miscellaneous recommendations:

S. Nos. 1, 5, 8, 10, 15, 16, 28, 29, 36, 37, 38, 40, 45, 46, 47; 48; 49; 50, 51, 52, 53, 54, 56, 57, 58, 59, 60; 61, 62, 63, 64, 67; 68, 70, 71, 73, 74, 75, 77, 80, 81 and 82.

II. ANALYSIS OF THE IMPORTANT RECOMMENDATIONS DIRECTED TOWARDS ECONOMY

S. No.	S. No. as per Summary of recommendations (Appendix VI)	Particulars
(1)	(2)	(3)
1.	25	Government should ensure that all the proposed projects for the production of lubricating oils in the country are completed in time so that valuable foreign exchange may not be spent on their imports after 1971.
2.	30	Considering the heavy imports of crude oil estimated at about Rs. 110 crores per annum by 1970-71, it is necessary to secure the maximum price advantage in the import of crude as the price reduction of a few cents per barrel would

(1)	(2)	(3)
		result in considerable saving of foreign exchange.
3.	32	Immediate action should be taken by Government to secure the maximum discounts on imported crude and cheapest tanker freight rates.
4.	43	Government should explore the possibility of importing entire crude requirements through a single agency *viz.* I.O.C. as that would result in substantial economy because of the bulk purchase involved.
5.	44	Similarly the imports of lubricants should also be channelised through the I.O.C.
6.	65	Pricing of petroleum products should be brought down by affecting economy in the marketing and distribution expenses of the marketing companies.
7.	72	Government should take effective measure to reduce drastically payments by the oil companies towards their overseas offices etc. which would result in saving of foreign exchange considerably.

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Sl. No.	Name of Agent	Agency No.	Sl. No.	Name of Agent	Agency No.
27.	Bahree Brothers,/188, Lajpatrai Market, Delhi-6.	27	33.	Bookwell, 4, Sant Narankari Colony, Kingsway Camp, Delhi-9.	96
28.	Jayana Book Depot, Chapparwala Kuan, Karol Bagh, New Delhi.	66		MANIPUR	
29.	Oxford Book & Stationery Company, Scindia House, Connaught Place, New Delhi —1.	68	34.	Shri N. Chaoba Singh, News Agent, Ramlal Paul High School Annex, Imphal.	77
30.	People's Publishing House, Rani Jhansi Road, New Delhi.	76		AGENTS IN FOREIGN COUNTRIES	
31.	The United Book Agency, 48, Amrit Kaur Market, Pahar Ganj, New Delhi.	88	35.	The Secretary, Establishment Department, The High Commission of India, India House, Aldwych, LONDON, W.C.—2.	
32.	Hind Book House, 82, Janpath, New Delhi.	95			