C. P. U. No. 202

COMMITTEE ON PUBLIC UNDERTAKINGS
(1971-72)

(FIFTH LOK SABHA)

NINETEENTH REPORT

HEAVY ELECTRICALS (INDIA) LIMITED

Ministry of Industrial Development

सत्यमेव जयते

LOK SABHA SECRETARIAT
NEW DELHI

April, 1972/*Vaisakha,* 1894(*S*)

Price : Rs. 4.05

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C_O_R_R_I_G_E_N_D_A

NINETEENTH REPORT OF THE COMMITTEE ON PUBLIC UNDERTAKINGS (FIFTH LOK SABHA) ON HEAVY ELECTRICALS(INDIA) LIMITED.

Page	Para	Line	For	Read
7	2.5	13 (from bottom)	Electrical	Electricals
8.	2.8	9	givep ermission	give permission
13.	2.24	5	reproducting	reproducing
24	3.22	1	required	enquired
40	4.22	6	manon	man on
40	4.23	2 (from botton)	tansformer	transformer
41	4.25	3	there frequently	the frequently
45	4.35	2	dealy	delay
45	4.39	15	dealy	delay
46	4.41	1	forsight	foresight
49	5.51	2 (from bottom)	team	steam
57	4.69	10	times	time
57	4.70	6	An	And
58	4.77	3	renoving	removing
60	4.83	3	omit the word 'of' after the word rovie	
61	4.86	10	ski	skill
67	4.102	4 (from bottom)	Government Management	Government/ Management

Page	Para	Line	For	Read
67	4.102	3 (from bottom)	Supervisors/ workers	Supervisors workers
92	8.4	10	to away	to do away
113	9.39	delete the heading of para No. 9.39		
113	9.39.2	1	9.39.2	9.39
132	10.42	20	included	including.
136	10.55	4	progducts	products
140	11.1	5	article	Articles
140	11.4	3	(i)	(1)
143	(17)	4	expedient	expendient
145	11.17	6-7	that the working	that for working
146	4.	1	manrer	manner
147	-	3	corsiderable	considerable
148	11.27	2	clection	selection
148	11.30	1	Add ", the Management stated that promotions were made" after the word "made".	
151	11.41	8	operators	operator
151	11.41	11	Add '=' after the words "Efficiency percentage".	

[illegible]	Para	Line	For	Read
152	11.44	4	Omit " given at the end of the para.	
153	11.50	3	Disciplin	Discipline
153	11.51	2	eRpresentative	Representative
155	12.3	5	equiment	equipment
155	12.3	9	to	the
155	12.4	5	sould	should
155	12.4	7	estimtes	estimates
156	-	10	relistic	realistic
156	12.7	2	ary	any
156	12.8	6	scarse	scarce
158	12.15	8	idletime	idle time
170	4.29 (Sl. No. 10)	11	hat	that
170	4.30 (Sl. No. 11)	5	considerd	considered
170	-do-	11	Electrical	Electricals
174	4.102 (Sl. No. 19)	14	per	part
185	9.51 (Sl. No. 35 contd)	23	recomend	recommend
185	-do-	27	scare	scarce
186	10.36 (Sl. No. 39)	1	10.36	10.36 & 10.37

a	Line	For	Read
36 No.	5 (from bottom)	realing	realising
37 o.	1	10.37	10.38 & 10.39
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40 o.	1	10.40	10.42

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COMMITTEE ON PUBLIC UNDERTAKINGS

(1971-72)

CHAIRMAN

Shri M. B. Rana

MEMBERS

2. Shri K. Baladhandayutham
3. Shri Dinen Bhattacharya
4. Shri G. Bhuvarahan
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7. Dr. Kailas
8. Shri S. N. Misra
9. Shri Amrit Nahata
10. Shri P. Parthasarathy
11. Shri Syed Ahmad
12. Shri Narayana Kalliyana Krishnan
13. Choudhary A. Mohammed
14. Shri Dahyabhai V. Patel

**15. Shri Kota Punnaiah

SECRETARIAT

Shri Avtar Singh Rikhy—*Joint Secretary.*

Shri M. A. Soundararajan—*Deputy Secretary.*

Shri M. N. Kaul—*Under Secretary.*

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* Elected w.e.f. 11-8-71 in the vacancy caused on the resignation of Dr V.K.R. Varadaraja Rao, M.P. on 29-7-71.

** Ceased to be member of the Committee w.e.f. 3-4-72 consequent on retire ment from Rajya Sabha.

COMMITTEE ON PUBLIC UNDERTAKINGS

(1971-72)

Composition of Study Group III on Electronics and Electrical Undertakings

1. Shri Dahyabhai V. Patel—*Convener*
2. Shri Amrit Nahata—*Alternate Convener*
3. Choudhary A. Mohammad
4. Shri Narayana Kalliyana Krishnan
5. Shri S. N. Misra

*6. Shri Kota Punnaiah

7. Dr. Kailas

* Ceased to be member of the Committee w.e.f. 3-4-1972 consequent on retirement from Rajya Sabha.

INTRODUCTION

1. The Chairman, Committee on Public Undertakings having been authorised by the Committee to present the Report on their behalf, present this Nineteenth Report on Heavy Electricals (India) Ltd.

2. This report is based on the comprehensive appraisal of the working of the Heavy Electricals (India) Ltd. done by the Comptroller and Auditor General of India as contained in the Central Government Audit Report (Commercial), 1970 Part V and also on an examination in depth of the working of Heavy Electricals (India) Ltd. upto the year ending 31st March, 1971.

3. The examination of the Heavy Electricals (India) Limited, was taken up initially by the Committee on Public Undertakings in 1970-71. The Committee on Public Undertakings (1971-72) took evidence of the representatives of the Heavy Electricals (India) Ltd. on the 11th November, 1971 and of the Ministry of Industrial Development on the 25th and 26th November, 1971.

4. The Committee on Public Undertakings considered and adopted the report at their sitting held on the 21st April, 1972.

5. The Committee wish to express their thanks to the Ministry of Industrial Development and the Heavy Electricals (India) Ltd. for placing before them the material and information they wanted in connection with the examination of Heavy Electricals (India) Limited. They wish to thank in particular the representatives of the Ministry and the Undertakings who gave evidence and placed their considered views before the Committee.

6. The Committee also place on record their appreciation of the assistance rendered to them by the Comptroller and Auditor General of India in connection with the examination of the Audit Paras pertaining to Heavy Electricals (India) Limited.

M. B. RANA,
CHAIRMAN,
Committee on Public Undertakings.

NEW DELHI;
April 26, 1972
Vaisakha 6, 1894. (S)

I

INTRODUCTORY

A. Historical Background

1.1. Absence of indigenous manufacturing capacity for heavy electricals equipment (required for generation, transmission and distribution of electric power) had restricted the production of electrical power. Imports in the country had ranged from Rs.12 crores to Rs. 20 crores per year during the period 1950-51 to 1955-56 and from Rs. 21 crores to Rs. 26.52 crores during the period of 1957-58 to 1961-62. It was in recognition of the need and importance of establishing the manufacture of heavy electrical equipment indigenously that the Government of India decided to set up the company which was formed on 29th August, 1956 under the Indian Companies Act, 1956. It is wholly owned by the Central Government and has an authorised capital of Rs. 50 crores.

1.2. Pursuant to the findings of the Advisory Planning Board (December, 1946) and the recommendations of a Technical Committee on Engineering Industries of the Industrial Conference held in December, 1947, the Government of India appointed a Committee early in 1948 headed by Dr. J.C. Ghosh, (the then Director General of Industries and Supplies) to explore the possibility of developing the manufacture of Heavy Electrical Power Plant to meet the requirements of the generation, transmission and distribution of power in the country. That Committee recommended that a factory for the manufacture of Heavy Power Plant should be immediately planned as a Government Project in collaboration with foreign manufacturers of international repute. Accordingly detailed project reports were invited from certain well known firms in U.K. and U.S.A.

1.3. Towards the end of 1949 after extensive survey carried out by their representatives, three firms (Associated Electrical Industries, U.K., International General Electric Company U.K., and Westinghouse of U.S.A.) submitted project reports to the erstwhile Ministry of Industry and Supply. After considering the three project reports, the exploratory committee recommended the establishment of a factory for the manufacture of 1,75,000 KW of plant per . year (approximate value Rs. 17.5 crores). The cost of the Project including working capital, but excluding housing, was estimated to be of the order of Rs. 22 crores. Of the three firms which submitted project reports, only M/S Westinghouse were willing to participate financially by way of a loan extending over a number of years to cover the overseas expenditure including the dollar element, and some permanent investment in the factory. Their affilliated company was also prepared for the erection and technical management of the factory over an initial period of ten years. Further consideration of the project was, however, deferred in the year 1950 owing to the prevailing financial stringency.

1.4. As hydro electric development schemes and large scale electrification of Railway were becoming necessary, the question of setting up of a Heavy Electricals Factory assumed new dimensions. The matter was, therefore, again taken up by the Ministry of Production with the Planning Commission in August, 1952 for inclusion of the project in the First Five Year Plan which was agreed to and a sum of Rs. 7 crores was provided for it out of the lump sum provision of Rs. 50 crores for basic industries and transport.

1.5. The Government of India then invited firms of international repute to submit project reports with a manufacturing programme, for an economic unit in which they would be prepared to participate financially as well as technically. Of the four firms which offered to prepare project reports, only two firms ultimately submitted such reports early in 1954.

1.6. While these project reports were being examined, the production of certain items in the existing manufacturing units in the country was expanding and the programme of the proposed State Factory had to be co-ordinated with production with other undertakings in the country. Hence a review indicating the capacity of the existing units for further expansion was considered necessary. The position was reviewed accordingly and Government affirmed that the setting up of a Heavy Electrical factory was an urgent necessity. But before taking a final decision Government again constituted in October, 1954, a committee headed by S. A. Gadkary, Consultant (Power) Planning Commission.

1.7. In its report submitted in January, 1955 the Gadkary Committee observed as follows :—

"(i) The existing production in India has been examined as also its possible expansion in the near future. Production is mostly confined to small transformers and motors. The Committee find that no heavy plant is being planned by the existing units, nor is there any unused capacity suitable for this purpose in the Government workshops and factories.

(ii) The Committee is of the firm conviction that the manufacture of Heavy Electrical plant in the country is essential for speeding up industrialisation and that the only way of achieving it is for the State to establish a factory for the purpose".

1.8. Finally Government accepted the recommendations of the Gadkary Committee to set up a factory for the purpose.

1.9. Proposals were then invited from well-known international firms engaged in this field for technical and financial collaboration. After a scrutiny of the offers received, M/s. Associated Electrical Industries of U.K. were selected as Consultants for the design and layout for the Heavy Electricals Equipment Factory and also to tender technical advisory service in the operation of that factory and an agreement was entered into with them on 17th November, 1955. As per the terms of the agreement the consultants prepared detailed project Report which they submitted in November 1956 and this report as approved by the Government of India in March, 1957.

1.10. A team of experts appointed by the Technical Consultants and assisted by a Technical Adviser for the Project recommended three sites in the country for the location of the Plant out of which the present site was considered to be the best and was finally selected. The Heavy Electricals (India) Limited is located along a main road near a main line railway station Bhopal, the capital of Madhya Pradesh.

1.11. The Consultants report was prepared for an annual output of Rs. 12.5 crores in single shift. In the Project Report it was envisaged that all the factory buildings with services should be completed by January, 1962. But in the middle of 1957 deterioration in the foreign exchange position necessitated a reappraisal of the development scheme in the Public Sector and the Consultants were requested to phase the scheme into two or more stages, with emphasis on quick return on investment and saving of foreign exchange, without curtailing the total capacity of the project as originally contemplated. The Consultants prepared a revised programme to complete the project in three phases. Construction was taken up in accordance with this rephased programme and production was started in one part of the factory on 1st July, 1960 as scheduled.

1.12. Against the original level of output of Rs. 12.5 crores for which the Project Report had been prepared by the Consultants, the Govt. as a result of review of the country's requirements of heavy electrical equipment carried out by the Planning Commission decided in 1960 to double the output of the factory to Rs. 25 crores per annum in two shift working. The scope of the project was further increased to Rs. 33.65 crores per annum as a result of changes in the size of the individual transformer units and water turbine and the increased output in the Traction and Transformer Departments.

1.13. In addition to the above, sanction was given by the Government to install facilities for the manufacture of Steam Turbines. The assessed output of the Steam Turbine Unit is Rs. 12.50 crores worth of Steam Turbines.

1.14. From time to time Government have also sanctioned expansions in capacity for already established products. They were :—

(i) In the Transformer Division to increase the capacity of power Transformers from 3000 MVA output per year and manufacture of special type Traction Transformer for 25 KV Freight Locomotive;

(ii) To increase the capacity of Capacitor Division to double the output; and

(iii) To increase the capacity of Traction Division to produce about 1400 Rotating Machines per year.

1.15. When all these expansions and the Steam Turbine Manufacturing Unit get into full production the total output of Bhopal complex will be over Rs. 60 crores worth of Heavy Electrical Equipment.

1.16. Taking into account the revised project Estimates and the estimated sanctioned cost of the various expansion projects the overall Project estimate including Township, would amount to Rs. 82 crores for an ultimate out-turn of over Rs. 60 crores per year.

B. Transfer of Factories to B.H.E.L.

1.17. The Heavy Electricals India Limited was incorporated on 29th August, 1956 for the manufacture of the Heavy Electrical Equipment such as hydraulic turbines, switchgears, transformers, controlgears, static capacitors etc. The three factories viz. (1) Heavy Electricals Plant at Ranipur, Hardwar, (2) Heavy Power Equipment Plant at Ramachandrapuram, Hyderabad and (3) High Pressure Boiler Plant at Tiruchirapalli, Tamilnadu; which were started sometime in 1962-63 were also being managed by the Company till November, 1964. Due to increase in the activities of the Heavy Electricals (India) Limited at Bhopal, these Units were transferred with effect from 17th November, 1964 to a newly formed Company—Bharat Heavy Electricals Limited, New Delhi.

C. Examination of the Project by Estimates Committee and Committee on Public Undertakings

1.18. The working of the Heavy Electricals (India) Limited, Bhopal, was examined by the Estimates Committee (1962-63). The Estimates Committee presented to the Lok Sabha their Thirty-Fifth report on the working of the project on the 5th April, 1963. The Second Report of the Committee on Public Undertakings (1967-68) on the Action Taken by Government on the recommendations contained in the Thirty-Fifth Report of the Estimates Committee was presented to the Lok Sabha on the 8th August, 1967.

1.19. The project was again examined by the Committee on Public Undertakings (1967-68). The Committee on Public Undertakings presented to the Lok Sabha their Twelfth Report on the working of Heavy Electricals (India) Ltd. on the 3rd April, 1968. The Fifth Report of the Committee on Public Undertakings on the Action Taken by Government on the recommendations contained in the Twelfth Report of the Committee on Public Undertakings (1967-68) was presented to the Lok Sabha on the 16th September, 1971.

1.20. One of the functions of the Committee on Public Undertakings is to examine the Audit Reports, of the Comptroller and Auditor General of India on the working of Public Undertakings. The present examination of the Heavy Electricals (India) Ltd. is based on the comprehensive appraisal of the working of this project contained in the Audit Report (Commercial) 1970, Part V.

II

AGREEMENTS

A. Agreements with Consultants

2.1. The Government of India entered into an Agreement with M/s. Associated Electrical Industries Limited, United Kingdom on the 17th November, 1955 appointing them as Consultants for a period of fifteen years for the establishment of a Heavy Electrical Factory. The main Agreement also provided for making legally valid arrangements for obtaining subsidiary technical assistance for the manufacture of capacitors and hydraulic turbines. Accordingly, Subsidiary Agreements were entered into by M/s. Associated Electrical Industries with M/s. British Insulated Callendars Cables Limited and M/s. English Electric Company, United Kingdom. These Agreements were approved and accepted by the Government of India on the 15th January, 1959 and 13th June, 1957 respectively. In addition to the Main Consultancy Agreement and the Subsidiary agreements, as mentioned above, the manufacture of the following items was also undertaken by the Company after obtaining designs and manufacturing information from the firms noted against each outside the Consultancy Agreement :—

Sl. No.	Name of the Item	Name of the firm	Particulars
1	2	3	4
1.	Manufacture of Hydraulic Turbines for Dehar Power Station.	M/s. English Electric Co.	The agreement was entered into with the firm on 18th April, 1968, and the firm was to receive *ad hoc* amount of £60,000. In addition the firm was to charge for the manufacturing drawings, special hydraulic and mechanical design and tests, necessary for the runner. The cost of technical specialists was also payable in addition to the above charges.

1	2	3	4
2.	Manufacture of Generator for the Dehar Power Station.	M/s. Associated Electrical Industries.	The agreement provides for the payment of a service fee of £35,000 in nine annual instalments, (the first instalment of £3,800 and the remaining eight instalments of £3,900 each).
3.	Manufacture of Y-160 Turbines for leander class A/s. Frigate.	M/s. English Electric Company.	Agreement dated the 31st January, 1968 entitled the firm to £5,490 for manufacturing information £10,000 to be paid in lump on signing the agreement plus 6 per cent of the selling price to be paid as royalty.
4.	Manufacture of transformers and rectifiers for use in A.C. Broad Gauge EMUS.	M/s. English Electric Co.	Drawings and designs received from M/s. English Electric Co. in consideration of an order for 15 sets valuing £1,67,175 having been placed with them by the Co.
5.	Manufacture of HP/LP Feed heaters for 120 MW T.G. sets 1 to 4.	M/s. Associated Electrical Industries.	Order No. 81354 dated the 27th Feb., 1968 was placed with the said firm. The Order provided for manufacturing, drawings and information (£59, 310) and value of components (£1, 93,500). Total value of the order was £2,52,810.

2.2 The main functions of the Consultants under the agreement were preparation of Detailed Project Report acting as Consulting Engineers, preparation of plans and specifications of the plant, machines, equipment and materials, examination and scrutiny of the tenders received, indication of delivery requirements of plant and machinery, supply of floor plans and general floor specifications, supervision of the construction of the factory and rendering technical advice in the operation of the factory as set out in Clause VIII of the Main Consultancy Agreement. In consideration of the services of the Consultants, according to the Main Agreement, a fee of £4 lakhs and royalty @2½per cent. (3 per cent. in the case of M/s. English Electric Company, U.K. for hydraulic turbines) of the total annual sales value, reckoned each year of the finished products of the factory minus the invoice value of the components purchased from the Consultants during the year were payable. Later on, a Purchasing Agency of Agreement was entered into engaging them as purchasing agents in U.K. for the purchase of plant and machinery.

2.3 The total amount paid to the Consultants under the Main Agreement up to 31st March, 1969 was Rs. 488.99 lakhs. In addition, the Company paid a sum of Rs. 24.60 lakhs under the Purchasing Agency Agreement up to 31st March, 1969.

2.4 During the evidence, the Chairman, Heavy Electricals (India) Ltd. informed the Committee that on the expiry of the old agreement on 16-11-70 a new Agreement had been entered into for steam turbines which also covered the extended assistance required for 30 MW and 120 MW and also for the nuclear turbine of 236 MW capacity. He also informed the Committee that they had entered into two other separate new agreements one for the manufacture of water turbines for a particular design and the other for capacitor Voltage transformers. In regard to the question whether the defects noticed in the original agreement had been rectified or not, the Chairman of the Company mentioned that the present agreement was a much simpler one and that all aspects of supply and technical assistance had been covered.

2.5 When enquired whether any disputes were pending between the Company and the consultants in regard to the implementation of the original agreement, the Chairman of Heavy Electricals (India) Ltd. stated:

'There were some claims put up by A.E.I. Ltd. in connection with the old agreement. Heavy Electrical (India) Ltd. also had some counter claims. I am glad to report that these have been discussed and an agreement reached on these claims on both sides. They had originally asked for a total payment of about £200,000 on various accounts for the consultants of under-charging of invoices, claims of element in Indian share of the commission on certain orders placed in UK on single tender basis, claims withheld as a result of wrong application of pricing formula, claims for the preparation of incentive schemes, claims for certain charges on transformers and rectifiers made to English Electric designs, claims for service charges on transformers made to Oerlikon design. We had also similarly some other claims. As a result of the discussion and negotiations we have come to an agreement and the final amount has been arrived at. The Board of Directors appointed a negotiating committee and the committee settled the amount.'

2.6 The Committee were also informed that in the new agreement 'penalty clause' had been included to ensure timely supply of components and that the new agreement was arrived at in consultation with the Ministry of Law.

2.7 In regard to the restriction imposed on exports in the old agreement the Financial Adviser of Heavy Electricals (India) Ltd. stated that the restriction was only during the currency of the agreement and that in the new agreement there was an "export clause" which read as follows :—

"During the continuance of this agreement and subject to the terms and clauses VI and XV thereof, Heavy Electricals (India) Ltd. may export to countries and in respect of orders to which AEI would have given its prior written approval in each case on a non-exclusive basis of the licensed material manufactured by the Heavy Electricals (India) Ltd. to the designs of AEI. AEI's approval shall not be unreasonably withheld".

2.8 The Committee observed that the words 'Unreasonably withheld' were not reasonable. The Chairman of Heavy Electrials (India) Ltd. also stated:

"In many of the agreements the foreign companies are reluctant to give a free hand. In some cases they name the countries to which we can export. To certain countries they say you must take our permission before you export where they have probably some trade interests. Only probably when we are not competing with them, they would givep ermission. The clause which says 'unreasonably withheld' is to be interpreted as more or less a moral undernstanding that it will not be very restrictive. We have got to have trust in our collaborators."

2.9 **The Committee note that the old Agreement with the Consultants which expired on 16th November, 1970 imposed a restriction on Heavy Electricals (India) Ltd. to export their products. In the new Agreement it is stipulated that AEI's approval shall not be "unreasonably withheld." The Committee feel that even this stipulation does not offer a free hand to the Company. During evidence, the Chairman of the Company termed it only as "moral understanding". The Committee recommend that in future, terms of the Agreements with foreign collaborators should be so negotiated and drafted that they do not impose any unreasonable restriction on the undertakings in the matter of export of their products to other countries.**

B. Scrutiny of Agreements

2.10 The Committee on Public Undertakings considered the provisions of the Main Agreement, Purchasing Agency Agreement and those with the Subsidiary Consultants in their 12th Report (Fourth Lok Sabha) and came to the conclusion that some of the provisions of the agreements overlapped and some Clauses of the Subsidiary Agreements were repugnant to the provisions of the Main Agreement. The Committee also felt that some of the provisions of the Purchasing Agency Agreement were not conducive to the best interests of the Undertakings. The Ministry have stated (May, 1970) that a committee appointed in July, 1969 was examining the remarks made by the Committee on Public Undertakings.

2.11 It was enquired during the evidence as to what steps had been taken to streamline the procedure for scrutinising of agreements to be entered into by the Heavy Electricals (India) Ltd. with foreign collaborators. The Chairman of Heavy Electricals (India) Ltd. stated that the Bureau of Public Enterprises had communicated to them general guidelines for technical collaboration agreements which were generally followed.

2.12 The representative of the Ministry of Industrial Development informed the Committee that the delay in appointing a Departmental Committee to go into the remarks made in the 12th Report (Fourth Lok Sabha) of Committee on Public Undertakings, (1967-68) regarding some of the provisions of the main Agreement with consultants namely M/s. AEI of U.K. which overlapped and some clauses of the Subsidiary Agreement being repugnant to the provisions of the main Agreement, was caused by referring the matter to the Company and selecting individuals who had to serve on that Committee. He further stated that the Madhya Pradesh Government also wanted to have one representative on their behalf on that Committee and they also took some time in selecting the representative. Ultimately a Committee was formed consisting of the then Chairman of Heavy Electricals (India) Ltd., the then Financial Adviser and Chief Accounts Officer of Heavy Electricals (India) Ltd. one Director from the Ministry and an advocate from Madhya Pradesh Government.

2.13 The Committee were informed by the Ministry that the Report was submitted by the Departmental Committee on 6th January, 1971 and that they were considering the Report and the action had not yet been finalised. It was further stated that in two-three months Government would finalise the action and submit a copy of their final report to the Committee.

2.14. Asked whether it was usual to have a State Government representative on the Committee, the representative of the Ministry stated:

> "It was not necessary, but the Madhya Pradesh Government represented very strongly that they were greatly interested in the project which was in the State and that they would very much like to have a representative and, in deference to their wishes, we agreed to have their representative, although it was not necessary to have a representative from the Madhya Pradesh Government. After all, when we are situated in a State, we have to carry the good wishes of the State with us."

2.15. The Ministry of Industrial Development forwarded a copy of the Departmental Report in February, 1972. In their Office Memorandum No. F. 24-2/69-HEM dated the 15th January, 1972, the Ministry have summed up the main recommendations of that Committee and the action taken by Government thereon which are reproduced below :

(a) "This Committee submitted its report in January, 1971, in which the Committee has made certain observations in relation to the payments of £6,000 to the Subsidiary Consultants, as also in regard to the Purchasing Agency Agreement with the collaborators, *viz.*, M/s. Associated Electrical Industries, U.K. As regards the payment of £20,000 to the Subsidiary Consultants (E.E.Co.) the Committee have stated that in AEI's letter dated 19-6-55, it was clearly and unequivocally stated that there would not be any increase in the lumpsum payment on account of the collaboration with the turbine makers referred to in that letter. According to that letter, AEI would have paid a sum of £15,000 to M/s. Boving & Co. and their associated. This amount was to come out of the lumpsum payment of £4,00,000 receivable by AEI under the Principal Agreement, which specifically included an element of £15,000 towards/subsidiary collaboration for Hydraulic Turbines. The Committee's view is that Government either should have insisted on reduction of £15,000 in the lumpsum payable to AEI under the Principal Agreement or agreed to reimburse only £5,000 to AEI out of £28,000 payable by AEI to EE Company under the Subsidiary Consultants Agreement. The Departmental Committee has stated that though it is doubtful whether AEI would have agreed for a reduction only in the lumpsum payment when the particular proposal of M/s. Bovings offer with its higher element of royalty of 5% was not accepted, one would expect that at some stage in the deliberations, this aspect should have been recorded and the reason why this reduction was not agreed to by the Consultants indicated.

(b) As regards the payment of £6,000 to the other Subsidiary Consultant (BICC) for Static Capacitors, the Departmental Committee has observed that the relevant portions of the TCA were not carefully worded to clearly bring out the correct position on lumpsum payments etc. Similarly, the Subsidiary Consultants agreement though concluded later was also not clearly worded on this aspect. It would thus seem that while giving final shape to the main and subsidiary agreements, the clear and unequivocal provision in the AEI's own proposal that the lumpsum payment to BICC would not be in addition to the lumpsum payment to AEI was lost sight of.

(c) As regards the arrangement for the purchase of capital equipment under the extended credit arrangement, the Committee has observed that while finalising the agreement with M/s. AEI, the Government could have—

(i) tried to exclude items of AEI Manufacture from the purview of cost plus basis of remuneration;

(ii) tried to isolate the overlapping services between Technical Consultants Agreement and Purchasing Agency Agreement and exclude them from the cost plus basis of remuneration, and

(iii) instead fix a ceiling on the remuneration at 5% on goods other than of AEI origin as provided in the TCA.

(d) It would appear from the above observations that there had been some lapse in the sense that certain aspects of the Technical Consultant's Agreement were overlooked when the Subsidiary Consultancy Agreements as also the Purchasing Agency Agreement were entered into. The above observations are, accordingly, brought to the notice of all concerned in this and other Ministries and the Heads of all Public Undertakings in order that as and when any proposals for foreign collaboration are considered and more agreements than one are executed, the recurrence of the peculiar situation that had arisen in this case, could be avoided in future."

2.16 In the Twelfth Report of the Committee on Public Undertakings (4th Lok Sabha) which was presented to Parliament on 3rd April, 1968, the Committee had pointed out that some provisions of the agreements overlapped and some clauses of the Subsidiary Agreements were repugnant to the provisions of the main Agreements. The Committee regret to note that Government took more than a year to appoint a Departmental Committee to examine the matter. The Committee are also surprised that though the Departmental Committee submitted its Report to Government in January, 1971, the Government took one more year to take a decision on the report of the Departmental Committee. The Committee feel that an important matter like this could have been handled by Government with greater expedition. The Committee expect that such delays will not occur in future.

C. Payments made for obtaining Drawings and Manufacturing Information

2.17 According to sub-clause (iv) of Clause VIII of the Main Agreement, the Consultants, *viz.* M/s. A.E.I. Limited were to supply techincal information drawings and manufacturing instructions sheets for the standardised equipments and design information for ordinary adaptations of existing electrical designs and individual designs for the manufacture of hydraulic turbines. Under sub-clause (v) *ibid*, they were to supply on payment of cost plus reasonable overheads such designs and drawings and equipment as involved major changes and work outside the normal products of the Consultants factories.

2.18 Clause 7 (vii) of Subsidiary Agreement entered into with M/s. English Electric Company for the manufacture of hydraulic turbines, envisaged that they would charge cost plus reasonable overheads for such designs, development works and technical planning of equipment to be manufactured in the factory which may require major changes to existing designs or the preparation of new designs.

2.19 Although Clause VIII of the Main Agreement enjoins that the Consultants would supply individual designs of hydraulic turbines, the Company made payments of £1,50,131 up to 31st March, 1969 to M/s. English Electric Company for obtaining drawings and manufacturing information on the ground that there is no standard design for the water turbines and the Consultants had to work afresh to develop and produce new designs for trubines to suit the existing size and hydraulic conditions. The Agreement did not spell out what are the standardised equipments and what are the normal products of the Consultants' factories.

2.20. All the factory blocks intended for the manufacture of the products as per the Original Project Report were designed, constructed and machinery installed as per layout plan prepared by the Consultants. The manufacture of switchgears, transformers, capacitors, traction machines and industrial motors has now been fully established. The assistance from the Consultants will, however be required for some time more in the case of hydro and thermal turbines and generators. An agreement between the Consultants and the Company extending the use of technical know-how for the production of 30/120 MW steam turbines has already been concluded.

2.21. The Chairman of Heavy Electricals (India) Ltd. explaining the position as to why £1,50,131 were paid upto 31.3.69 to M/s. English Electric Co., for obtaining drawings and manufacturing information when in the main agreement with M/s. A.E.I. there was a provision that the consultants would supply individual designs of hydraulic turbines, stated as follows :—

> "We are working now on 14 hydro scheme of which we got additional assistance on five schemes. In addition to these we got complete drawings and specifications for 30 types of hydro turbines. In the case of hydro turbines it is not as if one machine can be just used exactly in another location. So, each machine for each location has got to be designed. In spite of the fact that we got specifications and drawings for 30 machines we had to seek the assistance of the consultants for either modification or for redesigning of five schemes we had to seek their technical assistance. Therefore, we had to pay additional sum according to the terms of the agreement. In the case of these 30 machines we had to pay only the cost of reproduction of the drawings, some stated amount per drawing. Those that are available in the archives of the consultants we are entitled to get under the agreement but wherever we ask them to do any additional work, they will charge us the fee. Apart from these five, there are nine more schemes which are designed by the design engineers in Bhopal."

He also informed the Committee that in the main agreement there was a provision that wherever they wanted additional work to be done, they had to pay.

2.22. The Controller and Auditor General referred to the observation made by the Ministry of Law that the agreement did not define or provide any basis for deciding what were the normal products of the consultants' factories and wanted to know if the Management was satisfied that in the case of the items referred back to the Consultants additional work outside the standardised designs was involved for which they made payments. The Managing Director of Heavy Electricals (India) Ltd. stated :

> "We have a list of all the hydro-turbines executed in the past by our consultants. We had a way of judging whether the hydraulic

conditions for all these schemes were identical with the schemes which we have to make here or not. So the question of saying that you have got something on the shelf is very easily decided."

The Chairman of Heavy Electricals (India) Ltd. added that they were satisfied that additional work was involved in getting the designs which they wanted for hydraulic conditions.

2.23. Asked when they had to pay as much as £150,000 for certain items as additional payment for design documentation then the natural inference was that what they had got was not of much use, the Chairman of Heavy Electricals (India) Ltd. stated that the word 'Standardised design' was a misnomer in the case of hydraulic machine and it should be 'any design which is available in the works of the Consultants.'

2.24. The Committee asked whether the point regarding deciding what were the standardised designs and what were the normal production of the Consultants was made clear to the Ministry of Law at the time when the matter was referred to them. The Secretary, Ministry of Industrial Development stated :

"The question , I believe is in regard to our agreement with the collaborators regarding water turbine and this is in regard to obtaining manufacturing information from the consultant in regard to this water turbine. Our agreement with them provides that where there are finished jobs, the consultants have not shown there. We are entitled to take the drawings from their archives without payment. But in regard to any new machine that we may have, if there is any slight change to be made, then we pay for them. But if there is a complete redesigning of the machine needed, then also we pay for that."

2.25. The witness was asked whether the standardised designs brought without paying anything had been actually utilized. The Secretary, Ministry of Industrial Development said that these had been utilized by them to a large extent and that these designs could be obtained merely on payment of the fee for reproducting the things on a new paper. Asked as to how many standardized designs had been obtained and in how many cases they had deviated from the standardized designs, the Managing Director of Heavy Electricals (India) Ltd. replied :

"We have got 30 designs out of which we have used about 14 designs already in developing new designs. Our engineers are able to adopt it and modify it to the conditions in which we design machines here. The designs which we got, 30 are used as the basic data for development of our own designs. That is how the design process goes on."

The Managing Director of the Company further stated that it was not possible to tell in how many cases the standardized designs were not used as regards water turbines. In the case of steam turbine the witness infor med the Committee that a separate agreement had been entered into with M/s. Associated Electrical Industries Ltd. and that it was not included in the original project report.

2.26. The Committee wanted to know how was it that they had not to pay anything extra in the case of standardized designs. The Secretary, Ministry of Industrial Development replied that if they asked them to re-design to suit some conditions, then they had to pay but when the conditions were more or less similar to one of their projects, they had not to pay anything to the Consultants.

2.27. The Committee pointed out that though at the time of entering into agreement legal expert advice was taken yet they had a clear loophole in the agreement even when they had specified what kind of information and designs they wanted. In reply, the Secretary, Ministry of Industrial Development stated:—

"This impression is not correct. Our collaborators have in the last so many years provided machinery for so many hydro projects all over the world and for that they keep designs in their archives. Our agreement provides quite clearly that if we wanted to take out, then we did not pay any thing extra, the cost of reproducing that thing on a fresh paper and making out copies for which I think you will agree. It is quite satisfactory. Even the agreement provides that if we also ask our consultant from time to time some variation in our design in order to suit specific variation, then we also pay for that small change. We also find out how many engineers and draftsmen are involved in the change and then we pay them. If we ask them for new design, naturally we pay for that. By and large, what we do is even if there are slight variations needed in their designs to export, we take out from their archives and we project them and then we make redesigning over ourselves."

2.28. Asked whether U.K. was the best place for hydro design, the Secretary of the Ministry stated that they had been supplying the machinery all over the world. He pointed out that UK was a very small country yet in Scotland they had many hydro-electric projects. He also stated that a list of the cases in which deviations had been made by the consultants could be furnished by the Company.

2.29. The Committee referred to Clause VIII of the Main Agreement regarding payments amounting to £1,50,131 upto 31st March, 1969 made by the Company to M/s. English Electric Company and observed that such a huge amount would not have been paid if the Agreement had not been defective. The Secretary of the Ministry informed the Committee that in the Agreement itself it was provided that they would have to pay the total cost of the design if they had entirely a new design and in case they had any modification, they shall have to pay for the modifications made.

2.30. The Committee pointed out that according to the Agreement there was no standard design for the water turbines and the consultants had to work afresh and enquired what was the agreement between the suppliers and the Corporation. The Secretary, Ministry of Industrial Development stated:—

"As I submitted, the fact of the matter is that agreement, in principle, was all right. I hope it will be agreed in principle. It is correct that they were wanting a new design. We shall have to pay for the new design. But if some minor modifications were to be made in the existing designs, we have to pay for that. In principle, this agreement was quite all right. Now, depending on the circumstances of each order, if we have an order for a machine as Mr. Parthasarathy just now explained, a design which has already been made for some other machine by the Consultants somewhere, then we just ourselves made design modifications. In that case we have to pay the cost of papers etc. It is quite true that we had to ask them for entirely new designs in five cases. I am told that in five cases, entirely new designs had to be obtained from our Consultants and for this, at the rate of £30,000 we had to pay about £1,50,000."

2.31. The Committee observed that in the main agreement there must be some clause in the absence of which they had to pay huge amounts. The Secretary of the Ministry explained the position regarding hydro electric projects as follows :—

"In the hydro electric projects, really speaking, every machine has to be tailored. It is not like the system of turbine where 150 megawatts working at a temperature of measured water is considered to be less standard but in hydro elctric projects, this question is quite different, even the content of sand is quite different. The conditions there for hydro electric projects is quite different. It is really rather rare that you get the same conditions in the projects or similar conditions in two projects."

Elucidating the point regarding making provisions in the Agreements the witness said that it was difficult to be specific about it. In some cases the conditions may be similar to the existing projects but there might also be a number of projects where the whole machine had to be designed after each of the Projects, individually.

2.32. The Committee enquired whether they had taken a design without making any modifications, drawings with minor modifications or whether they had taken fresh designs. The Managing Director of Heavy Electricals (India) Ltd. informed the Committee that they had 30 sets of design drawings without modifications for existing schemes out of which about 15 had been used.

2.33. The Committee pointed out that on page 9 of the Audit Report (Commercial), 1970 it was stated that :—

"According to sub-clause (iv) of Clause VIII of the Main Agreement, the Consultant *viz.* M/s. A.E.I. Ltd., were to supply technical information drawings and manufacturing instruction sheets for the standardised equipments and designs information for ordinary adaptations of existing electrical designs and individua designs for the manufacture of hydraulic turbines."

2.34 The Committee enquired how another Company that is M/s. English Electric Campany came in the picture to whom £1,50,101 (Rs. 488.09 lakhs) had been paid for the new designs. In reply, the Secretary, Ministry of Industrial Development said :—

> "Just now, before me is the Agreement to which reference has been made. In this paragraph at foot of page, 9 reference is to sub-clause (iv) of clause 8 :—
>
> > "The consultants shall for the items covered by the schedule of equipment to be manufactured, supply technical information, drawings and manufacture the instruction sheets for the standardised equipment and design information for ordinary adaptations for existing electrical designs and on the selection of a suitable firm for subsidiary technical assistance for manufacture of hudraulic turbine....Actually here the item is that the consultants were to help in the selection of a suitable firm for subsidiary technical assistance for the manufacture of hydraulic turbine."

The witness clarifying the postition further mentioned that according to the provisions in the Agreement the main consultants were only to help Heavy Electricals (India) Ltd. in locating and selecting suitable subsidiary consultants for hydraulic turbine and regarding other things they would give the know-how within the amount given in the contract.

2.35 The Committee need hardly point out that if there are no standardised equipments and designs for hydro-electric turbines then the Main Agreement with Collaborators (Associated Electrical Industries) should have been worded suitably to bring out the intention precisely and in unambiguous terms.

The Committee note that out of 30 sets of designs/drawings obtained under the main Agreement from the Associated Electrical Industries, the Undertaking have been able to adapt 15 of them for manufacture of turbines indigenously.

The Committee suggest that Heavy Elctricals (India) Ltd. should make full use of design drawings already available under the Main Agreement from the Associated Electric Industries in order to adapt and improve upon them to suit the requirements of new hydraulic turibnes/equipment to be manufactured by the undertaking. The Committee consider that wherever it is not found feasible after careful consideration to make use of the drawing designs available with the Associated Electrical Industries under the Main Agreement then a considered proposal to purchase the drawing design from the English Electric Company may be brought forward before the Board of Directors and their prior approval taken before incurring additional expenditure. The Committee need hardly point out that this course of action would ensure that proper record of the decision taken to incur additional expenditure would be available for future reference and use.

III

PROJECT ESTIMATES

A. Project Estimates and their revisions

3.1 The Project at Bhopal has been set up with the collaboration of M/s. Associated Electrical Industries Limited of the United Kingdom, who besides acting as Technical Consultants have also offered financial help for the Project. Initially it was contemplated to have an annual output of Rs. 12.5 crores in a single shift with a capital expenditure of Rs. 3,525 lakhs. In order to meet the likely increase in the demand for heavy electrical equipments, the Project Report of the Consultants had to be changed from time to time covering proposals for expansion of the original product-lines *viz.* switchgear, transformers, etc. and also for taking up the manufacture of Steam Turbines and Generators. The following table indicates the estimated cost of the Project as envisaged in the Project Report prepared in November, 1956 *vis-a-vis* the revisions made from time to time and expenditure incurred by the Company there against up to 31st March, 1969 :—

(Rupees in lakhs)

Sl. No.	Particulars	As per Project Report (November, 1956) (Output Rs.12.5 crores)	2nd revision (December, 1962) (Output Rs. 25 crores)	3rd revision (September, 1963) (Output Rs. 25 crores)	4th revision (April 1966) (Output Rs. 33.65 crores)	5th revision (Feb, 70) (Output Rs. 33.65 crores)	Actual expenditure up to 31st March, 1969
1	2	3	4	5	6	7	8
1.	Factory building and works	1,136	1,331	1,338.60	1,338.60	1,338.60	1,313.85
2.	Factory services .	339	405	407.57	491.80	491.80	527.98
3.	(a) Plant and Machinery . . .	1,851	1,851	2,082.75	2,288.86	2,378.75	2,296.31
	(b) Custom duty .	..	90	100.57	268.28	389.00	368.59
	(c) Purchase Agency agreement and credit agreement	..	113	..		..	..
4.	Lumpsum payments to consultants .	54	54	53.32	60.02	60.02	59.38
5.	Cost of U. K. Training	100	100	100.00	124.76	124.76	124.76

1	2	3	4	5	6	7	8
6.	Furniture and miscellaneous equipments	45	45	45.41	48.72	48.72	53.31
7.	Permanent hostel for trainees . .		41				
8.	Township .	..	900	839.92	836.41	839.00	836.65
9.	Administration charges			144.14	299.41	299.41	300.65
10.	Payment of interest			5.27	90.55	90.55	81.31
11.	Construction of stores . . .					50.00	46.21
12.	Block X . .	..	..	4.00	..	..	..
	TOTAL . .	3,525	4,930	5,121.55	5,847.41	6,110.61	6,009.00

3.2 The revised Project estimates (exclusive of the Expansion Schemes) of Rs. 6,110.61 lakhs were approved by the Board of Directors on the 25th March, 1968 but the Government of India was approached for sanction of these estimates only on 2nd May, 1969 (*i.e.* after a period of 13 months). The revised estimates were sanctioned by the Government in February, 1970.

3.3 During evidence, the Committee asked why the Company had approached Government for sanction of the latest Project estimates of Rs. 6,110.61 lakhs after more than one year of their approval by the Board of Directors. In reply, the Financial Adviser of H.E. (I)L stated :—

"The original estimate was Rs. 58.47 crores and the revised estimate was Rs. 61.11 crores. The increase was 4.5 per cent. The Government of India had set up the V.K. Krishna Menon Committee to review the working of the sanctions and they recommended that if the excess in any estimate in a public sector undertaking was within 10 per cent, then the Board of Directors themselves could go ahead and sanction the expenditure. They laid down a stipulation that in the estimates if on any particular item the expenditure exceeds 10 per cent, then we will have again to go to the Government. This discussion went on for quite sometime. Although the total overall expenditure was within 10 per cent, that is, 4.5 per cent, in the case of one particular item, it was 45 per cent increase.

The particular item in which it was more than 45 per cent was the Customs duty. It was decided that we should go to the Government. Then, it was decided that actual customs duty paid during the year might be assessed so that when we go to the Government for revised sanction for customs duty under which the expenditure was more than 10 per cent, we should give exact figures. That is why in May, 1969 after the actual amounts were known, we went up to the Government."

3.4 Explaining the time lag, the Financial Adviser of the Company said that they wanted to ascertain the exact figures to know the actual customs duty incurred before approaching Government and that took time.

3.5 During the course of evidence of the Ministry of Industrial Development, the Committee asked as to who decided the policy regrading revision of the Project Estimates and whether Government sanction was taken by the Government.

The representative of the Ministry stated :—

"The original sanction was for Rs. 58.48 crores. Now the Government rules is that an increase up to 10% in the project cost can be approved by the Board of Directors themselves without having to go to Government. But there is a special rider that in regard to any particular detailed component, the increase should not have been more than 10%. Now in this case the overall increase is within 10% of the sanctioned cost. Therefore, the Board of Directors would ordinarily have been able to deal with this case without referring to Government but there were 11 heads under which this estimate was framed. One of the heads is 'customs duty' . There was an increase in this head because the rate of customs duty had been increased by about 20%. Therefore, the project had to go to Government and since this was only in respect of customs duty increase, this was really more or less a formality because the Government increased the customs duty and that has to be paid. But I would like to submit that the overall increase was within 10% and normally that would have been within the powers of the Board of Directors of the Company to sanction."

3.6 The Committee enquired that when it was stated that the sanction was not necessary, why then after 13 months the sanction was asked for. The Secretary, Ministry of Industrial Development stated that he could not explain the position exactly on behalf of the Company but he added that when they moved Government for sanction, the amount they needed had to be put in which took a little time.

The Committee asked why Government took ten months for according the sanction. The witness stated :—

"I agree that we should have taken much less time. But one thing is that although in this case the sanction of the Government is really needed only because the customs duty were required more or less within 10 days, without consulting the Finance, there was an item whose cost had gone up by about Rs. 90 lakhs and that was in cost of machines installed in the factory. Now, when the case came to Government, then somebody here thought that this amount of Rs. 90.0 lakhs, although it is within 10 per cent of the overall increase, yet there was a certain amount of correspondence with the Finance Ministry and the Project Authority, to find out why this amount of Rs. 90.0 lakhs is required. So, that took sometime."

3.7 Explaining the position further, the Secretary of the Ministry of Industrial Development stated :

"The machinery had been in our possession and it has been installed. What I am saying is that it was worth about Rs. 22.0 crores and it went up by about Rs. 90.0 lakhs . The point is that in the project estimate which was sanctioned, the cost of the machinery had been taken as Rs. 22.0 crores and the actual increase was Rs. 90.0 lakhs for various reasons. This increase is within the 10 per cent of the estimated cost. Therefore, there was no Government sanction needed for this increase. But since the amount of Rs. 90.0 lakhs appeared to be larger, we did refer this to Government and that took a little time."

The Secretary further explained that the extra amount did not involve any additional machinery but the cost of existing machinery only had gone up by Rs. 90 lakhs.

3.8 Time is the essence of success of any commercial undertaking. The Committee regret to note that delay of about two years occurred in sanctioning the Revised Project Estimates of the undertaking. The Management of Heavy Electricals (India) Ltd. took more than a year to approach Government for sanction of the revised project estimates of Rs. 6,110.61 lakhs after they were approved by the Board of Directors of the Company and the Government took another ten months to accord their sanction to the above-mentioned revised estimates. During evidence it was conceded that Government should have taken much less time. The Committee are convinced that both the Management and Government had taken more time than what was warranted. The Committee are surprised that the Project Estimates were revised five times. The Committee recommend that Government should lay down clear guidelines in the matter and that the procedure for processing the revised estimates should be streamlined with a view to finalising them and communicating the orders without loss of time.

3.9 The Committee need hardly point out that while examining such upward revision of estimates, Government should go into its impact on the economics of production; in fact the estimates should be so realistically framed that there should be no need for their revision.

B. Expansion Schemes and revised scope of manufacture

3.10 In order to bring certain items like power transformers, traction motors, steam turbines, etc. within the coverage of manufacture, eight expansion Schemes have been undertaken by the Company. The idea was to convert the existing facilities to undertake manufacture of products in higher ranges and also to provide balancing facilities so as to improve the utilisation of idle capacity. The total expenditure incurred up to 31st March, 1969 on the various expansion schemes was Rs. 1,120.24 lakhs as against the sanctioned estimate of Rs. 1,604.95 lakhs. Besides, an expenditure of Rs. 26.45 lakhs was also incurred on the balancing facilities (Rs. 15.87 lakhs) and refugee rehabilitation scheme (Rs. 10.58 lakhs) for which no provision had been made in the sanctioned estimates.

3.11. In order to cater to the changing demands of electrical equipment, the Company has also undertaken the manufacture of some new products like transformer auxiliaries, reactors, mica insulations, industrial rectifiers, small motors, voltage regulators, Eddy current clutches for traction controlgear and contractors.

3.12. The Committee enquired whether any feasibility study or survey was conducted in respect of the six expansion schemes/projects which were under implementation. The Chairman of Heavy Electricals (India) Ltd. stated that three expansion schemes *viz.*, Steam Turbine Project, Power Transformer Expansion Project and Traction Equipment Project were included in the supplementary project report prepared by the Consultants. In respect of the other three expansion schemes, namely, augmentation of Telephone facilities, Traction Transformer Project and the Capacitor Project, the project authorities themselves made a feasibility study. He further stated that out of the total of Rs. 19 crores, the Steam Turbine Project would alone cost Rs. 15 crores, and the Power Transformer Expansion Scheme Rs. 3 crores and the balance of Rs. 1 crore would cover the remaining four, expansion schemes.

3.13. Asked whether he thought it advisable to envisage expansion schemes as profitable even though the existing machines were not working to their installed capacity, the Chairman, Heavy Electricals (India) Ltd. stated :

> "I would like to answer the question in this manner : As regards the Steam Turbine Project there was no question of idling machines because this was a new project. This is entirely a new project which nearly accounts for Rs. 15 crores out of Rs. 19 crores. Therefore, this question is partly answered in regard to the first project. As regards the transformer Expansion Project, the machinery installed earlier were fully utilised and this expansion was considered necessary for there was no idling of machines in this item of manufacture. In the case of Traction Equipment Expansion project, it is true that at the time when the expansion was taken up, the full capacity was not utilised. But in view of the heavy demand placed by the Indian Railways and the forecasts of demands that have been made although the machinery installed had not been fully utilised, it was considered that there would be need for further expansion. Therefore, this project was taken up."

3.14. The witness also said that no profitability study was made in respect of the expansion schemes. Explaining the position further the representative of the Company said :—

> "The profitability study was not included in the supplementary project report submitted by the Consultants. This supplementary project report was not accepted by the Government as it stood; then, we were asked to go to steam Turbine project as a separate project. Similarly for Traction Transformer project and Traction Equipment Expansion Project, we prepared in HEIL from own resources studies. In that study, in September, 1968 when we went to the Government for Rs. 14.6 crores for the steam Turbine Project, we included a profitability study. We said : so many turbines, the sale price will be so much etc. Then, we prepared a project report. What the Chairman meant, when the consultants prepared a project report, it was not there. They wanted 150 thousand pounds extra. And we thought that it was not necessary and that we have sufficient experience and knowledge not to spend that money. So, we did it ourselves. Only because we were a little inexperienced, it took a little time."

Completion Reports

3.15. The Committee drew attention of the Management to paragraphs 87-88 of 35th Report of the Estimates Committee (Third Lok Sabha, April, 1963) regarding preparation of comprehensive completion reports for the individual factory blocks and asked whether such reports has since been prepared for the factory blocks already completed. The Chairman of Heavy Electricals (India) Ltd. informed the Committee that the completion reports regarding civil engineering part of these blocks had been submitted to Government but regarding machines the reports had not been submitted as in some blocks machines, were still to be installed. Asked about the reasons for taking such a long time for installation of machines, the Managing Director stated that the project had gone through five revisions and was finally accepted by Government in February, 1970. The equipment included in the various revisions had not been completed for want of sufficient time to do so. The Financial Adviser of the Company had this to say :

> "As Financial Adviser I have myself come in the way of incurring expenditure all of a sudden. I feel that we have to plan out the shop. It is not merely the installation of the machinery and putting the machines there. The production build up has to go side by side and I must ensure that whatever machines are installed are properly utilised by the management before further machines are installed. Apart from the machines there is the question of the skilled technicians and employees. We also want the latest design in machines. Now that we are building up production and the required skill, funds, can be released so that there is coordinated development. It is these things that come in the way of progress of expenditure."

3.16. He also informed that Committee that the machines which had arrived had been installed. The Managing Director added that machinery worth Rs. 70-71 lakhs had yet to be ordered and that they were waiting for the development of the load to instal special purpose machines.

The Committee enquired about the target dates if any fixed for completion of expansion schemes. The Secretary of the Ministry stated in this connection as follows :—

"As a matter of fact, the project report which was made up for the expenditure by our consultant did not indicate any date. But that Project Report was not really accepted by the Government. Subsequently, when the project report was made out by the Project Authority, they had indicated the time of 20 months for completion of one shop. On the basis of that completion, the date has been worked out in Annexure I of the Audit Report. Actually the Completion date is going to be as follows : for the manufacture of Steam turbines March 1973. Project for manufacture of transformer for 25 KW-March, 1973 Project for expansion from 108.00 to 186.00 KW—March, 1972; project for establishment of additional facilities for the manufacture of power-transformer (3000 to 6000 MW output per year) March, 1975; [accumulation of water supply has been completed already; Augmentation of telephone facilities—-March, 1972".

3.17. The Committee asked whether completion of the various expansion schemes were delayed and if so, what action was taken by the Ministry to pursue the matter to see that the dates were not extended every now then. The Secretary of the Ministry of Industrial Development stated that they had been discussing the project reports and the targets fixed with the project authority and the company authority from time to time.

3.18. When enquired how often they discussed the matter, the Secretary stated :—

"Very often they come here; once in a month. We take up those things almost every month. What has happened is that many of these projects are being delayed not because we do not want to complete them earlier but because we want the expertise which is needed for doing these various jobs should be developed before we go in for more installation of machinery and plant. We find that the various machineries that this HEIL is building that is water turbine and the steam turbine, they are very complicated machineries and it takes some time to acquire the technology and expertise to handle them. We have installed a machine, we have trained experts available to work on the machine, otherwise much of that machinery will remain idle and useless."

3.19. The Committee pointed out that it should have been envisaged earlier when the target date was fixed and enquired what the time lag was and whether the reasons for delay were shortage of funds and delay in the sanction by the Government. The Secretary of the Ministry of Industrial Development stated that funds were not the problem. Explaining the position why

Government took ten months in according their sanction he said that it was only a formality and added :—

"I would submit that if there was any work to be done quickly, then I would certainly have moved much faster. I would like to assure you that custom duty was paid, everything was done. Probably, we went slightly slow.....

In regard to this particular question of expansion, there was really no dearth of funds. It was not money which was standing in the way. It was really the development of expertise which took a little longer time."

3.20. Explaining further the development of expertise, the Secretary stated :—

"The machines imported from abroad have given a lot of trouble. The experts could not easily find out exactly the type of defect. For small machines of 15 mg. Turbine people had to fly to Western countries to know why it was vibrating. I would like to submit that in this kind of project certain time has to be allowed to enable the skill to be developed and some measure of compatibility has to be maintained."

3.21. Asked if the machines received in India were kept idle before the expertise could develop, the Secretary, Ministry of Industrial Development informed the Committee that they had been getting the machines according to the expertise developed as they did not want to invest more money of the Company before they were in a position to use the machines. He added that particularly in regard to the Steam Turbine and Hydro Electric Turbines there had been a constant re-thinking about the scope. The witness further stated :—

"At one time 15 mg. was considered to be a big one. Now the time has come when we need 100 mg. to 120 mg. We are already thinking of 200 mg. Turbine. May be, by the time we complete this project we shall have 200 mg. as our experts are thinking and as requirement of the Company for larger machines come up we may go on revising these things and keep bigger machines."

3.22. The Committee required as to when the training for development of expertise started on that particular machinery. The Secretary of the Ministry stated in reply :—

"It is a question of expertise developing to work on the machines. What is necessary to develop is the skill in our own workers and quite a large number of workers work on every machine. For example for the production of Steam Turbine there may be anything like 500 to 600 workers who contribute to the making of that machine. In the machine, the balancing of Rotar, different time has been given. Balancing of Rotar fixing of blades, angles, type of servicing blades require time. All this comes by actual operation and gradually people acquire skills."

3.23. Observing that our workmen had surpassed even the foreigners, the Committee wanted to know the time proposed to be taken for acquisition of skill for manufacture of Rotar. It was also pointed out that a sum of Rs. 1306 lakhs had already been invested on the work completed upto March, 1970. In this connection, the Secretary of the Ministry stated :—

"I would like to submit that what happened is that initially we may start with 50 megawatt and then we go on to 100 and then 200. It is a continuing development which is taking place because the size and the type of machines are not static. It is not a factory producing some standardised thing. We have to go on developing from one to another size. In the bigger sizes, various new problems are posed and solutions have to be found and new expertise developed to a certain extent. This is a continuous process in a factory like this. From one range of pressure and temperature in the turbine, we go ahead."

The Secretary of the Ministry added :—

"I would like to submit that while we are developing the expertise, the production is going on. The skills have been developed and simultaneously the production is going on. As far as the results of the working of this company are concerned, in 1973-74, we expect to break-even and then start making profits, which means by that time, we shall have acquired sufficient expertise to produce sufficient goods which will meet all our costs, including interest and depreciation and cost of production etc. and we shall be able to break-even and after that it should be a continuous sort of story of raising profits, because production will go on, and we shall go on improving our financial working. It is not as if we are not producing anything. While we do so, we are developing expertise. But it takes a little longer for the workmen to have that."

3.24. The Committee observed that the targets had not been reached and it was a matter of concern because there had been continuous losses. The Committee wanted assurance that the target dates would not be extended further. The witness said that the dates for the completion of the various items in the expansion project which he mentioned were quite realistic and they would be stuck to.

3.25. The Committee pointed out that the Project Report did not indicate the target dates of completion in respect of 6 out of 8 schemes. The Chairman, Heavy Electricals (India) Ltd. explained that the target dates had since been fixed. The Managing Director also stated that they had regular target dates and regular production schedule.

3.26. The Committee note that Heavy Electricals (India) Ltd. have undertaken eight expansion schemes at an estimated cost of Rs. 16.05 crores to cover the manufacture of items like power transformers, traction motors, steam turbines, etc. The objects are stated to be manufacture of products in higher range, provision of balancing facilities and catering to changes in demand, etc. The Committee find that in six out of these eight schemes, no specific target dates for their completion were fixed. Not only this, some of these

expansion schemes for example, Traction Equipment Expansion Project, have been undertaken even though a part of the existing capacity was stated to be lying idle. The Committee cannot too strongly stress that before any expansion scheme is allowed, Government should make sure of the requirements on short term and long term basis, the economics of manufacturing them in the Project by expansion and laying down a time bound programme for production. The progress of work should be carefully watched both at the level of the undertaking and Government to ensure that the target dates for installation and manufacture are adhered to so that the objectives underlying expansion are achieved.

C. Steam Turbine Expansion Scheme

3.27. In 1963, the Government of India sanctioned the Expansion Scheme for the manufacture of steam turbines and generators on the basis of the Supplementary Project Report submitted by the Consultants. The following table indicates the date of sanction of the scheme, expected date of completion, estimate of capital expenditure involved, expenditure incurred up to 31st March, 1969 and the progress made :—

Name of the Scheme	Date of sanction by Govt.	Target date for completion	Expected date of completion	Capital estimate	Expenditure up to 31st March, 1969	Progress on 31st March, 1969	Remarks
					(Rupees in lakhs pre-devaluation)		
Maunfacture of steam Turbines and Turbo Alternators up to 600 MW per annum.	4/7-9-1963	No specific date given in the original Project Report	October, 1969	997.87	862.98	88% of civil works completed, 82% of machine tools and equipments have since been ordered.	**

** In the revised estimate duly approved by the Board in the meeting held on 25th March, 1968, a total expenditure of Rs. 1,465 lakhs, on the scheme has been approved, The Govt. of India's sanction is, however, still awaited. The Project has not been completed so far (January, 1970).

NOTE :—According to Audit the further revised estimate has since been submitted to the Board of Directors on 14th February, 1972.

3.28. The Steam Turbine Project envisaged an output of a maximum of seven sets aggregating 600 MW per annum No profitability study was, however, made in the Supplementary Project Report by the Consultants. It was in March, 1968 when the project estimates were revised from Rs. 997.87 lakhs to Rs. 1465 lakhs that a profitability study was made.

3.29. On the basis of an indication given by the Government of India and the Planning Commission in 1963-64 that there would be a demand for ten 120 MW sets in the country during 1966-71, the expansion scheme suitable for the manufacture of steam turbines of 120 MW was undertaken by the Company in March, 1964."

3.30. Attention of the Management was drawn to the fact that no specific date of completion was mentioned in the Project Report although the expected date of completion was indicated as October, 1969. The progress as on 31.3.69 indicated that 88 per cent of civil works had been completed and 82 per cent of machine tools and equipments had been ordered. As the expected date of completion of the scheme had already expired, clarification in the matter was sought.

The Managing Director of Heavy Electricals (India) Ltd. explained that October, 1969 related to their capital estimate of Rs. 997.87 lakhs, the estimate was revised to Rs. 14.65 crores and the project was not yet complete.

3.31. During evidence, the Committee pointed out that the Steam Turbine Expansion Scheme was sanctioned by Government in 1963 on the basis of Supplementary Project Report which did not indicate any target date of completion. The Project was incomplete till May, 1971 although expected date of completion was given as October, 1969. The Managing Director of Heavy Electricals (India) Ltd. stated in this respect :—

> "It is not strictly the position because the Government did not give the sanction on the basis of consultant's project report. They did not accept the consultant's project report and we prepared a preliminary report at that time for Rs. 997.87 lakhs. Information on this is given in annexure to the Audit Report. The completion date for the project was given as October 1969 but the project had to be revised later to Rs. 14.65 crores for various reasons. Some machine tools have to be modified and all that and that is the project on which we are working now. So this completion date is strictly not relevant to the project."

3.32. In a written reply furnished after the evidence, the Heavy Electricals (India) Ltd. have given the following main reasons for delay in completion of the Project :—

(i) The funds required for machine tools to be procured originally from the UK were inadequate and we were advised by Government to procure these under the French & Italian Credits. A sum of Rs. 175.00 lakhs was allocated for this purpose against the French and Italian Credits.

(ii) At one stage, it appeared that the demand for thermal sets in the country was limited, particularly during the recession period, and it was considered desirable to go slow on this project until the demand picks up.

(iii) The slow progress and also the two revisions that have been necessitated, are due to lack of adequate and sound knowledge in drawing up the Project Report for the manufacture of sophisticated project like Steam Turbine and Generators. Though we have the assistance of the Consultants at the earlier stage, bulk of thinking and work have been done by the Indian staff who have had not much of experience in this type of work.

3.33. During evidence of the Ministry of Industrial Development, the Secretary of the Ministry stated :—

"The position is that our collaborators did submit a supplementary project report, but that was not accepted by the Government and later on the project authorities themselves made out a project report which the Government accepted ultimately. In that report, every indication was given that the project would be completed within 20 months of the sanction of that project. The dates on which these projects expansion is likely to be completed in regard to various items are included in it."

3.34. The Committee pointed out that delay on the part of Heavy Electricals (India) Ltd. meant holding up programme of the industrialisation as these generators and other power equipment were required for generating power for industrial expansion. The Committee also observed that the schedule of the Company seemed to be lopsided because they did not have target dates of completion. In reply the Chairman of the Company stated that the delay occurred because the British manufacturers who were to supply the runners took 18 months. The Managing Director stated that in the case of one turbine set *viz.* III Santaldih the delivery was delayed by six years and eight months. The Managing Director added that some times the customer was not prepared to accept the machine and thus it was not only their own delivery which caused delay. The Committee then suggested that in future the facts such as late delivery of materials by the suppliers which upset the delivery schedule of the Company should be brought to the notice of Audit so that such items may not appear for comments in the Audit Report.

3.35. The Government of India in their letter dated 7th October, 1964 approved the placing of orders for the components for the first 4 sets of 120 MW Turbines for assembly/manufacture at Bhopal during the period October, 1964 to April, 1965 at a price not exceeding Rs. 430 lakhs.

3.36. The first order for 2 sets for Santaldih was received in May, 1965. Itwas contemplated that the first set for Santaldih would be manufactured ımost completely with imported components. The first set was imported nd delivered straightway to the customer by 31st March, 1969.

The order for other sets were received as follows :—

1. D. V. C.	Chandrapura	20-3-1968
2. D. V. C.	Chandrapura	16-10-1968
3. Gujarat Electricity Board . . .	Ukai	29-8-1969
4. Gujarat Electricity Board . .	Ukai	29 ' 8-1969

3.37. In the meantime, orders for components for the remaining 6 sets were also placed from time to time for being financed out of the U.K. credit released in April, 1966. The Company also arranged for all pre-production activities such as finalisation of drawings, specifications, etc. for 8 sets by end of 1967.

3.38. According to the indication given by the Management to the Government of India in August, 1969 the value of materials and components ordered till then for manufacture of Steam Turbines was about Rs. 17 crores, out of which those worth Rs. 12 crores had already been paid for and shipped by that time. In addition to this, the Company incurred an expenditure of about Rs. 2 crores on account of engineering and manufacturing charges, bringing the total expenditure to Rs. 14 crores up to August, 1969.

3.39. On the basis of the projection made in February, 1967, the delivery period of the various sets was expected to be as follows :—

I. Santaldih I . . .	February, 1968 —May, 1968
II. Chandrapura .	August, 1968 — Dec., 1968
III. Santaldih II	December, 1968—June, 1969
IV. Chandrapura	April, 1969 — Aug., 1969
V. Korba . . .	July, 1969 — Oct., 1969
VI. Untied . .	October, 1969 — Feb., 1970
VII. Santaldih III . . .	January, 1970 — May, 1970
VIII. Koradi (Nagpur)	April, 1970 — Aug., 1970

3.40. As mentioned earlier, only one set has so far been delivered. According to the programme of manufacture, the anticipated delivery dates of the remaining 5 sets, for which firm orders have been received, are given below :—

Sl. No.	No. of Sets	Delivery as planned by the Company in February, 1970: Turbine	Generator
(1)	II Chandrapura	December, 1970	August, 1970
(2)	III Santaldih	June, 1971	October, 1971
(3)	IV Chandrapura	December, 1971	April, 1972
(4)	V Ukai	June, 1972	December, 1972
(5)	VI Ukai	December, 1972	April, 1973.

3.41. The cycle of manufacture of 120 MW set is approximately 3 years. It would, however, appear from the table showing the progress of capital expenditure on this expansion scheme that the Expansion Project has not been completed so far for the manufacture of these Steam Turbines. Taking into account the manufacturing cycle involved (*viz.* 3 years) and the fact that the arrangements for pre-production facilities were made in anticipation of orders, the delivery schedule as planned by the Management in February, 1970 appears to be too long except in the case of Chandrapura 1st Unit, even if the dates of orders are taken as the starting point as may be seen from the table below :—

Nature of set	Date of order	Expected delivery period as per projections made in Feb., 1967.	Delivery as planned in Feb., 1970.	
			Turbine	Generattor
1. DVC—Chandrapura . .	20-3-68	Aug., 68 to Dec., 68	Dec., 70	Aug., 70
2. DVC—Chandrapura . .	16-10-68	April, 69 to Aug., 69	Dec., 71	April, 72
3. Ukai—Gujarat Electricity Board	29-8-69	.. ..	June, 72	Dec., 72
4. Ukai—Gujarat Electricity Board	29-8-69	.. ..	Dec., 72	April, 73

3.42. According to the Management, in the earlier years of establishment of manufacture, the manufacturing cycle would be longer, specially taking into consideration the sophistication of the product.

3.43. Having regard to the manufacturing cycle of 3 years involved, the indication of the work load according to orders in hand is suggestive of non-utilisation of a part of the capacity even when developed.

3.44. The Management have stated (May, 1970) that "the facilities developed are not exclusively for these ten sets only but will be utilised for a long time not only for the manufacture of subsequent 120 MW sets but also for different other types and ratings of Steam Turbine Sets."

3.45. This may, however, involve creation of additional facilities, the extent of which is not readily ascertainable.

Procurement of Components ahead of requirement

3.46. As a result of placing of orders for components in 1964 in anticipation of the orders to be received, the Company had to keep its resources locked up for a long period, thereby leading to loss in the form of payment of interest. In the absence of any information as to the dates of receipt of components/raw materials against each set, the time lag between the dates of receipt of materials and their actual utilisation is not available. The Management intimated (January, 1970) that :—

> "..... the value of major components and raw materials already received for 7th and 8th sets to which customer's orders are yet to be received amounts to Rs. 40 lakhs (Approximately)."

3.47. The Committee asked the justification for procurement of components and other raw material for the manufacture of Turbo Sets in anticipation of the actual orders for their manufacture and thus locking up capital running into lakhs of rupees for a long time. The Chairman of Heavy Electricals (India) Ltd. stated that the components were ordered for the turbo set on the basis of certain projections of the requirement of thermal power equipment and that allocation at that time was not made.

3.48. There was some delay in getting the shop ready for production and some of the components and unfinished equipment had come earlier than they were needed. The Committee insisted on justification for early procurement of components and enquired whether the Company had incurred loss in doing so. The Managing Director of the Company admitted that early procurement of components could have been avoided. He explained that there was delay in the construction of the block and that they were held up by various things like foreign exchange difficulties. The equipment of the block got delayed and it was very difficult for them to cancel the orders once they were placed.

3.49. The Committee enquired why the profitability study was not made. The witness informed that it was not made in the Project report itself. However, in the covering letter of the Company, details were worked out.

3.50. It was pointed out that:—

"When this paragraph of Audit Report (Commercial) was sent to the Ministry as well as to the Company, at that time, it was not mentioned that profitability study was mentioned in that covering letter. This paragraph was sent to the company as well as to the Ministry for comments and it was discussed by the Ministry with the Audit Board Members and it was not mentioned at any time in any covering letter".

3.51. The Committee note that in 1963-64, Government of India and Planning Commission gave an indication of the likely demand for ten 120 MW sets of steam turbines in the country during the period of 5 years i.e. from 1966-67 to 1970-71. Taking this into account the Government of India sanctioned the Steam Turbine Expansion Project in 1963 at an estimated cost of Rs. 997.87 lakhs (revised to Rs. 1465 lakhs in March, 1968) with an out put of a maximum of seven sets at the rate aggregating 600 MW per annum. The Committee also note that the first set of 120 MW turbine was imported and delivered straight away to the customer by 31st March, 1969. The order for other 4 sets were received between March, 1968 and August, 1969. The Committee are surprised that the orders for the manufacture and supply of the Steam Turbines were not received by the Heavy Electricals (India) Ltd. in accordance with the indications given by the Planning Commission and the Government of India in 1963. The Committee, therefore, recommend that a realistic demand analysis should always be worked out by the Government before embarking on production or an expansion programme.

3.52. The Committee are a little puzzled by the phenomena of shortage of power in most parts of the country and lack of firm orders on the Undertaking for manufacture of generators and turbines. The Committee are, therefore, of the opinion that there is urgent need for integrated planning and coordinated execution.

3.53. The Committee find that the "Supplementary Project Report" prepared by the Consultants did not contain any profitability study. This profitability study was made only in March, 1968 i.e. after a lapse of a period of about 5 years. The Committee are distressed to note that completion of the project has lagged behind and delivery schedule drawn up by the Management even for those sets for which firm orders were received, had not been kept up. On the basis of projections made in February, 1967, for example, 8 sets were to be delivered by August, 1970 but against this only one set had been delivered even though the delivery schedule as planned by the Management was rather long as compared with the normal cycle of 3 years for manufacture of a steam turbine. The Committee recommend that the management of Heavy Electricals (India) Ltd., should take advantage of modern management techniques like Programme Evaluation Review Technique (PERT) to guard against the usual inadequacies and pit falls in the matter of ensuring adherence to delivery schedules.

3.54. The Committee also note that according to the indications given by the Management to the Government of India in August, 1969 the value of materials and components ordered till then for manufacture of steam turbines was about Rs. 17 crores out of which total expenditure incurred upto August, 1969 amounted to Rs. 14 crores. The Company had thus to keep its resources locked up for long. The Committee are, therefore, of the view that Management of Heavy Electricals (India) Ltd. should not have ordered for major components so much in advance of firm orders and allowed its scarce resources to be so blocked leading to avoidable burden on account of payment of interest. The Committee recommend that in future, the Management of Heavy Electricals (India) Ltd. should so plan its development of pre-production that the facilities created for the purpose do not remain unutilised and their capital does not remain stuck up for long periods.

3.55. The Committee find that the very purpose of acquiring components etc. in advance was defeated by the delay in placing orders by the customers like the State Electrcity Boards and also by slow development of expertise by Heavy Electricals (India) Ltd., to execute the orders. The Committee are of the view that advance planning for acquiring components and parts would have served larger interests of the country had there been integrated planning in related spheres.

IV

PERFORMANCE ANALYSIS

A. Production Performance

4.1. Heavy Electricals (India) Ltd. manufactures a diverse range of heavy electrical equipment in its eight main project divisions. These divisions are:—

(a) Switchgear and Controlgear Division,

(b) Transformer Division,

(c) Capacitor Division,

(d) Traction Motor Division,

(e) Industrial Motors Division,

(f) Large Motors and Generators Division,

(g) Water Turbine Division, and

(h) Steam Turbine Division.

4.2. According to the Project Report a period ranging from 4 to 8 years, depending on the nature of the product, was required for achieving full planned production in respect of the different products.

4.3. The Original Detailed Project Report submitted by the Consultants in the year 1956 envisaged an annual output of Rs. 12.5 crores on single shift basis. This level of output as originally contemplated has, however, been modified from time to time and the value of production estimated in April, 1966 at Rs. 33.65 crores annually on attainment of the full rated capacity. After taking into account the reassessment of original capacities (as modified for expansions), the installed capacity, and the expected dates of achieving full installed capacity as indicatd by the Management are given in the following table:—

Product	Unit	As per Project Report for Rs. 33.65 crores		Expansions		Final Capacity		Date by which final stage is expected to be reached		Remarks
		Qty.	Value lakh Rs.	Qty.	Value	Qty.	Value lakh Rs.	For Project of Rs. 33.65 crore output	For expansion Projects	
1	2	3	4	5	6	7	8	9	10	11
1. Swithchgear and Controlgear .	No.	3670	770			3670	740	1971-72	..	Switchgear capacity will be reached by 1970-71
2. Power Transformers . . .	MVA	3000	540	3000	500	6000	1040	1970-71	73-74	
3. Other transformers, traction rectifiers, etc. . .	No.	Various	160			Various	160	1968-69		
4. Freight Loco transformers . .	No.			160	216	160	216		70-71	
5. Capacitors . .	KVAR	54,000	25	246,000	65*	300,000	90	1963-64	71-72	*Sale value per KVAR is low for the new design planned under the expansion.

6. Traction machines and truction control gear . .	No.	965	880	590	236	1665	1174@	1970-71	73-74	@The figures of final capacity do not agree with the sum of original and expansion capacities because of changed prices and reassessment of original installed capacities.
7. Medium and large Motors . . .	HP	315,000	290	..		425,000	450@	1972-73	...	
8. Hydro Plants (No.)	MW	·400	700			500(7)	920	1972-73		
9. Thermal Plants (Nos.) . . .	MW	..	..	600(5)	2145	600(5)	2145		73-74	
			3365		3162		6935			

4.4. According to the above reassessment the final capacity is expected to be reached completely by 1973-74. The value of total output at final capacity is expected to be Rs. 69.35 crores. On the basis of projections made for profitability study the value of output in 1973-74 is expected to be only Rs. 52.19 crores.

4.5. The Ministry have stated (May, 1970) as follows:—

(i) In the case of the output projections made for the profitability study, the Company was asked "specifically to take into account the orders in hand and the prospective order position while projecting the Sales volume.

(ii) The product mix obtaining in a particular year could be very different from the one assumed for the purpose of capacity assessment, which is usually done on a national basis.

(iii) It is the experience of even foreign heavy electrical manufacturers of world-standing, that, in the case of such custom-built equipment, realisation of full capacity of all the products simultaneously is not possible, and a 75 per cent, realisation should be considered reasonable."

4.6. The factory went into regular production from 1961-62 onwards, and the product-mix anticipated in the Project Report had undergone considerable changes in the course of actual implementation. When the annual output was estimated at Rs. 33.65 crores in 1966 no time bound programme of gradually achieving the capacity from year to year was drawn up; nor was any indication as the number of years required for achieving full planned output made. For the first time the Company indicated the installed capacity during 1967-68. Similar exercise was made in 1968-69. The installed capacity as indicated by the Management, targets fixed and the actual production of the main items for 1967-68 and 1968-69 are given in Appendix-II.

4.7. The production represented those certified by the Mangement as having been finished at the end of each accounting year. The Company Auditors expressed the opinion that the production shown to have been completed by 31st March, 1969 was not transferred to the warehouse even after the lapse of 2 to 3 months because of "some work of not too material nature still remained to be done thereon". An analysis of the manufacturing orders completed before 31st March 1969 indicated that in 49 cases the production shown to have been completed by 31st March, 1969 was not despatched till February, 1970.

4.8. The following reasons have been attributed by the Ministry (May, 1970) for the delay in despatch of the items mentioned above:

(i) "In some cases the customer cancelled the order and alternative arrangements had to be made to sell the machines, which naturally takes time in the case of such custom-built equipment.

(ii) In the case of hydro projects like Koyna the customer himself has asked to defer despatches for reasons of slow progress at site.

(iii) In some cases, the despatch has to be necessarily delayed until the associated equipment is also ready at HEIL, for example, the turbo-generator has to await the steam trubine, the traction motor has to be despatched alongwith the controlgear."

4.9. It would be seen that the targets fixed were much below the install ed capacity and the actual production fell short of the targets fixed from year to year.

4.10. The reasons for the short fall in the achievement of targets were stated to be as under:—

(i) Some of the products are sophisticated and of high quality and standard, the acquisition of required skill takes a long time and various teething troubles were experienced.

(ii) Indigenous development of materials and components is a slow process; some of the suppliers of materials and components failed to keep up their delivery commitments, particularly the Consultants who were the major suppliers of the components.

(iii) The shortage and non-availability of certain materials.

(iv) The shortfall in production in respect of switchgear and steam turbines during 1967-68 and in respect of controlgear during 1967-68 and 1968-69 was attributed to lack of orders.

4.11. The Consultants in their report for the period ending November, 1969, however, observed as follows :—

"Another general explanation for shortfalls in output is delay in obtaining satisfactory supplies of materials and components both from outside suppliers and from feeder departments within the factory.

Delays and the inconsistent quality of indigenous supplies :

Failure of supplies from "Internal" feeder departments has been the subject of comment in several previous reports, but it is evident that the situation has deteriorated very considerably over the past year in respect of the Fabrication Department. This is a key department upon which the outputs of the Water Turbine, Heavy Plant and Transformer Departments are entirely dependent, and which affects also, to a lesser extent, the Motor and Capacitor Departments.

Efforts are being made to tide over the immediate difficulty by placing orders with outside, and even overseas suppliers for large fabricated components. This should not normally be necessary. There is ample fabrication space, plant and personnel to meet any possible requirement of Bhopal factory and these must be used efficiently to satisfy these requirements. The frequently heard criticism that there is insufficient fabrication area is not valid. What is happening is that jobs are standing on the shop floor, occupying manufacturing space, for far too long a time.

Urgent steps to improve the productivity in the Fabrication shop are essential."

4.12. During evidence, the Committee drew attention of the Management of the Company to the statement made by the Ministry of Industrial Development in May, 1970 that even for foreign Heavy Electrical manufacturers of world standing, it was not possible to realise full capacity of all the products and that 75 per cent realisation should be considered reasonable and enquired what was the basis of that statement. I reply, the Managing Director of the Company stated :—

"This is based on the knowledge and experience of what is happening in other countries. Other companies' balance sheets and installed capacities figures are not really published. But this is done by discussion with various people. In a factory like HEL you have 8 different factories. There may be 100% production, say, in transformers and that may not be so in some other line. It is quite possible because that depends upon the order and various factors. Published figures show that within this figure of 52.19 crores profitability will be achieved. I worked in AEI for 16 years before joining Government. And there also, I have found that it does not have. Of course, in those private sector Undertakings, they do not go by this installed capacity. Merely the output and the profitability of output is their main consideration."

4.13. He further mentioned that the General Electric Co. and AEI had more or less similar experience and stated that their factories grew up with years and therefore they did not list out the installed capacities.

4.14. The Committee referred to the reassessment made by the Management according to which the final capacity was expected to be reached completely by 1973-74 at a total output of value of Rs. 69.35 crores which was later on down graded to Rs. 52.19 crores when fresh estimated operation results were made in September, 1969 and asked how these were to be reconsiled. The Secretary of the Ministry stated that the installed capacity was Rs. 69.35 crores and further explained that output was calculated on the basis of installed capacity. There was to be an installed capacity of every plant and according to him, the actual production from a plant was never 100 per cent. The calculation for 52.19 crores on the same basis was 70 per cent of the installed capacity of 69.35 crores.

4.15. The Committee pointed out that the estimate of 52.19 crores was on the basis of price level in September, 1969 and Rs. 69.35 crores was on the basis of price level prevailing one year earlier and enquired if the prices had gone up how could the value go down. The Secretary of the Ministry stated :

"On the basis of price prevailing in September, 1969 the total installed capacity of the plant would be Rs. 69.35 crores. Every particular unit and every machine in the whole HEIL was being used to full capacity. But in an Engineering workshop it can never be a practical proposition that every machine is fully loaded on all the 365 days a year. In fact, the actual manufacturing output that you can expect from the workshop is 70% and on that basis the actual production i.e. the optimum production would about 52.19 crores. They have taken the price level of September when the estimate was made."

4.16. He added that the two estimates were at the price level prevailing n September, 1969. The Managing Director of HEIL said :—

"Both the figures are at the same basis. The installed capacity of Rs. 69.35 crores was obtained by using the same price level as the production capacity of Rs. 52.19 crores was calculated. All that we are seeking to say is that an installed capacity of Rs. 69.35 crores in an engineering industry of this kind has various machines working. Therefore, if you attain a production of 75 per cent, we say generally the world's experience is like that. These are not two different price lines."

4.17. The Committee observed that Rs. 69.35 crores was on installed capacity and Rs. 52.19 crores was when they break-even. In reply the Secretary of the Ministry said :

"Not the break-even, I may submit that according to all the information we have about engineering workshops of this nature, this is the optimum production that one expects to have because in an engineering workshop of such a large magnitude, it is not possible to keep every machine loaded at 100 per cent capacity for all the 365 days in a year. Therefore, in actual practice, in the engineering workshops if you attain an output of 75 per cent of the installed capacity that is considered to be good. But it does not mean that we shall rest there. We shall try to get the best results and this is what we should try."

4.18. Explaining the position regarding price rise the Secretary of the Ministry stated :—

"I would say that the out-turn in terms of money would increase as the price is increased. If we say that Rs. 52.19 crores is the optimum production that we shall reach in 1973-74, if prices in 1974 are higher than 1969 let us say by 20 per cent. then we should push it up by 20 per cent."

4.19. The Secretary agreed with the remarks that if the price level increased and the value of production increased that did not necessarily mean that physical production also increased.

4.20. The Committee observed that Rs. 69 crores was previously estimated as the installed capacity and later on it was reviewed and the figure of production was downgraded. The Secretary replied that he was sure that Rs. 69.35 crores was the installed capacity.

4.21. In a written reply furnished after the evidence, the Company, explaining the position regarding making of exercises for indicating the installed capacity stated :—

"As applicable to this industry two terms are relevant in this context, viz : the "installed capacity" and the "developed capacity". As regards the installed capacity, it only indicates the mere completion of installation of machine tools and equipment, with no regard for the skills to be developed or to the orders available. As mentioned in the Audit Report, the installed capacity for 1967-68 has been indicated. Thereafter, additions to the installed capacity are realised only through the completion of the sanctioned expansion schemes. There are internal targets for addition of capital equipment against each expansion scheme and the progress on the same is reported in the monthly report to the Ministry also. At the end of each year, an assessement of addition to installed capacity is made on the basis of completion of installation of capital equipment. Thus, it is ensured that achievement of installed capacity in realistic against the targets.

As regards developed capacity, the Company regularly prepares a "forward plan" for production for the next five years which reflects the probable output level. These are reviewed every year taking into account the developments that have taken place in the meanwhile—such as actual availability of orders for the immediate future, skills developed etc. The Audit Report has also quoted (*vide* Page 12) from one such Forward Plan "the value of output in 1973-74 is expected to be only Rs. 52.19 crores".

4.22. It was pointed out by the Committee that production during 1969-70 was less than what it was during 1967-68 and 1968-69 in respect of certain items. The Managing Director of H.E. (I)L stated that fall in production was due to labour trouble during the year 1969-70.

The witness added that there had been other reasons also. He said :

"With the manon the job, you measure efficiency because the incentive scheme is there, because he works better and he produces more. But if he is standing idle, there is no measurement and there is no efficiency, that is how it happens."

4.23. During evidence of the representatives of Heavy Electricals (India) Ltd. the Committee asked whether the two production divisions which were stated to have started production in the year 1960 had reached the optimum level and if not, what the main reasons were and byw hat time they were expected to reach the level of production for which they were set up. The Managing Director replied as follows :—

"The divisions which went into production were the transformer and switch gear. The switch gear has not reached the optimum production because in the year 1967, there was a fall in production; there was a paucity of orders, they have to go back on production due to lack of order in the tansformer. There has been some sort of misconception about the transformer shop capacity. If you go by the consultant capacity it was 686 MVA in single shift, but in the double shift, it was about 1400. That output was practically reached in 1968-69. But because of the bigger sizes and because of the expansion in the project which took upto 3000 KVA, this additional expansion, that thing of Rs. 33 crores has not been reached yet. We have got a target of 2500 next year. We will reach it and year after that, we will reach 3000."

4.24. The Committee pointed out that the targets fixed were much below the installed capacity and that the actual production fell short of the targets fixed from year to year. The Chairman of HE(I)L explained the position as follows :—

"It is true that while the machines that have been installed could produce higher output as compared to the targets set from year to year, we submit that the production also depends upon acquisition of technology and technological skills and reaching efficiency by the men to the adequate level. If you simply go by the installed capacity in the machines alone, we are below the installed capacity. The development of the capacity from year to year is also dependent upon the order book position. Fortunately, now, our order position is satisfactory except in the case of hydro turbines. We had adequate orders also. But our development of skills was not at the same rate as was anticipated. The project report itself envisaged that the absorption of full skills will take about 6-7 years for hydro turbines."

4.25. The attention of the Management was drawn the following observation of the Consultants.

"There frequently heard criticism that there is sufficient fabrication area is not valid. What is happening is that jobs are standing on the shop floor, occupying manufacturing space; for far too long a time urgent steps to improve the productivity in the fabrication shop are essential."

4.26. The Chairman of the Company stated that there was general complaint that adequate floor space was not available. They thought, he said, it was a reflection against their capacity to plan the shop properly. What they said was, "this is not a correct thing. Actually, materials are lying on the fabrication job for too long."

4.27. The Committee enquired if they had any formula to work out the percentage of installed capacity which will be attained as the developed capacity of the Company.

The Chairman of the Company said that according to his information, 75 per cent of the overall capacity would be attainable for the plant as a whole. He also added that if there was installed capacity it should be possible to attain the full capacity provided the men acquire the necessary efficiency. It should be possible to produce the whole lot of goods on the basis of the machines installed.

4.28. The Committee note that the original Detailed Project Report as submitted by the Consultants in the year 1956 had envisaged an annual output of Rs. 12.5 crores on single shift basis. In April, 1966, the Management estimated that on attainment of the full rated capacity the value of production would be Rs. 33.65 crores. Subsequent re-assessment of the final capacity indicated that the value of output at final capacity which would be reached by 1973-74 was expected to be Rs. 69.35 crores. Projections made for profitability study put the value of output in 1973-74 at Rs. 52.19 crores. The Committee find that when the annual output was estimated in 1966 at Rs. 33.65 crores, no time bound programme for gradually achieving the capacity from year to year was drawn up nor was any indication as to the number of years required for achieving full planned output made. The Committee are surprised that it was only in 1967-68 that the Company indicated the installed capacity for the first time. It is unfortunate that the Management of Heavy Electricals India Ltd. had been fixing targets of production much below the installed capacity. The performance of actual production has left wide gaps because the actual production fell short of even the targets fixed by the Management itself. It is indeed deplorable that in 49 cases the production shown to have been completed by 31st March, 1969 was not despatched till February, 1970. The Committee recommend that reasons for fixing targets below the installed capacity and the actual production being less than even those targets should be probed into by Government to ensure better performance in future.

4.29. The Committee find that in their report for the period ending November, 1969 the Consultants had referred to deterioration which had set in, in the Fabrication Department of the Company and observed that the oft repeated criticism that there is insufficient fabrication area is not valid. The Consultants have disclosed that what is happening is that "jobs are standing on the shop floor, occupying manufacturing space, for far too long a time". The Committee recommend that as the Fabrication Department occupies a key position and acts as a feeder department to other departments of the Company, the Company should ensure that there is no hold up of fabrication jobs in the fabrication department.

4.30. During evidence the Managing Director of Heavy Electricals (India) Ltd. stated that the statement that "even for foreign heavy electrical manufacturers of world standing it was not possible to realise full capacity of all the products and that 75 per cent realisation should be considered reasonable" was based on his knowledge and experience of what was happening in other countries. The Committee were not supplied with any other details in support of this statement. Whatever be the actual position in other countries the Committee recommend that the Management of the Heavy Electricals (India) Ltd. should regard it as their supreme duty to raise the level of production to an extent that the gap between the installed capacity and the actual production is narrowed down, if not altogether eliminated.

B. Delay in manufacture

4.31. A test check revealed that there is considerable time-lag between the date of delivery as now planned by the Management and that originally indicated in the manufacturing order. Illustrative instances are given in

Annexure III of Audit Report (C), 1970. According to the reports submitted to the Management Committee on 18th September, 1969, 49 important orders relating to industrial machines, switchgear and controlgear, heavy plant, industrial application transformers, flange proof motors, hydro plants were running behind schedules. Out of the 49 orders, 24 orders provided for levy of penalty by the customers in the event on non-observance of delivery dates.

4.32 During evidence, the Financial Adviser of the Company, informed the Committee as under :—

> "May I submit about the 49 cases that are referred to at the annexure out of which the first category are the cases where the customers cancelled the order and alternative arrangements for sale had to be made which naturally took time. I will now cover all the 49 cases. Items 1 to 4, 32, 39 to 42, 44 to 46, 48 and 49 at annexure II are the items which come under this category *i.e.* these serial nos. are those where the customer cancelled the order. The second category is where the customer himself has asked that the despatch of the goods should be deferred because of the slow progress at site. This covers in the annexure at serial Nos. 5, 8, 9, 11, 15, 17 to 25 and 47 of the Audit Report. The third category of cases are where the despatch could not be made because the associated equipment which was insisted by the customer was not ready. This refers to cases 6, 7, 10, 12, 13, 26 to 31. Items 14 and 16 have been held back to collect more information out of tests to help the future design. We made use of the lack or urgency on the part of the customer togather this additional knowledge. Items 33 to 38 and 43 are awaiting inspection and despatch instructions from the customer. This is the explanation for 49 cases."

4.33 The Committee wanted to know whether the customers cancelling their orders do not forfeit their deposit. The Managing Director of the Company stated that those orders were placed by the Public Sector Undertakings like MAMC and HMT. When asked why HE(I)L did not insist on deposits from their consumers, the Chairman stated:—

> "In the case of turbine, we are insisting on advance being paid. In the case of motor, we are asking for a deposit, because it is a competitive market. Since the private sector does not insist on a deposit or advance, we have to follow like that. But for the turbo set which merely costs 4 to 5 crores each, we are insisting on the deposit being given."

4.34 The Committee drew attention of the Management to the statement made by the Company in August, 1971, that in 44 cases a total sum of Rs. 8,43,617 50 had been deducted by the customers as penalty for non-observance of delivery dates and delay in supply of orders and for the waiver of which they were still negotiating with the customers. Asked for the latest position in this regard, the Financial Adviser of the Company said :

> "We have not paid the penalty for that. Actually it was not "amounts recovered". And the clauses is not penalty clause. The Clause

says if the customer has suffered any liquidated damages, he can recover. To most of the customers we had written that, "You please let us know if you have suffered any liquidated damages. And out of these cases, there are three sums given in this. Out of 44 cases, in 40 cases, the amount has been waived.

Two cases relate to the Punjab State Electricity Board for supply of transformers. They have still withheld Rs. 32,000 on this account. And we are corresponding with them. There is one case of Industrial Machines which is going on. We are still discussing it with the Air India. And the last case is with TISCO. There was delay for six weeks due to labour trouble. Out of Rs. 8,43,617.50 Rs. 7,92,000 has been cleared."

4.35 The Vice-Chariman, Central Water & Power Commission was asked to state whether the progress in manufacture by the Company considered reasonable. The Vice-Chairman, C.W. & P.C. stated as follows :—

"It is true, we are at the receiving end and we are charged with the task of ensuring timely installation of generating capacity so that the electricity starts flowing to the consuming points. From time to time, we have been discussing with our counterparts in the Ministry of Industrial Development how the delay in delivery of the sets affects the completion of the project. That is quite obvious. If you will kindly allow me, I would like to make a submission, if I am accepted as a knowledgeable person in the matter of steam turbine over which I have spent long years. I would submit that this is one of the most criticial equipment which requires a lot of skill to produce it accurately. We have experience that if we do not have that skill, this can cause a disaster. I would give you just an instance in a simple language. This machine is subjected to very high temperature and pressure, it may be 1000° F, and about 2000 lbs. per square inch roughly. There are two parts of the steam turbinestatic part and there is a dynamic part. Both are subject to expansion and wear tear. The clearance to achieve the efficiency to utilise the maximum quantum of heat through the machine is of the order of milimetres, sometimes it is fraction of the milimetre. One has to bear in mind that while it is subject to a more critical, high pressure and high temperature and the expansion of material between dynamic and static parts the manufacture of all the components of the steam turbine has got to be within very very close limits. It is true our labour is intelligent. I have seen labour in other countries including Russia also. Sir, it takes a long time to acquire the expertise. I would give you a simple example. A lathe operator can be trained in three to six months to operate the lathe, but it is another story if he is given the task of making accurate machining subject to clearance of tolerance of one thousands of an inch. There are lathe operators who have taken ten years to achieve that skill. But if you relax that specification, then you accept immediately the danger that we have to face as operating engineers. So, to my mind, three years' training in components of steam turbines is not very much."

4.36 The Committee observed that at the rate of 3 years, five sets of people could be trained. The Vice-Chairman stated that they had already produced machines which were working. They had, he said, produced various items like transformers which had been in operation for 10 years. The time lag, he informed, was only in the field of steam turbines.

4.37 In reply to a question, the Secretary of the Ministry mentioned that nine Hydro-electric machines were produced by Heavy Electricals (India) Ltd. which were already functioning. He further stated that no Hdyro-electric project was lagging behind on account of machines not having been supplied in time.

4.38 The Vice-Chairman, Central Water & Power Commission said that dealy in supply of machines has not in all cases held up a project but by and large they have delivered machines according to the need of the project.

4.39 The Committee referred to the Audit Report in which it was mentioned that the supply of water turbines had been delayed due to late receipt of imported raw material from M/s. EE Co., U. K. The Secretary of the Ministry admitted that orginal delivery dates had not been stuck to in regard to water turbines as well as steam turbines. He added that in many of the Hydro-electric works, the civil works had also been delayed and even if the machines had been supplied the project would not have been able to use them. Quoting an example he stated :

"Two days ago, I happend to be in Bhopal for a meeting of the Research and Development Association of the electrical industries and I found there, for example, for Koyna Project the machine is ready; it is lying in storage, but the project authorities are not willing to take it because the civil works are not complete. In this hydro-electric project, where particularly considerable portion of civil works have to be constructed, there is usually a lot of dealy in the construction of the civil works. Although we have certainly slipped, what I was submitting was that perhaps on account of slippages in the civil works, the project itself was not delayed. I do not say there have been no slippages in the delivery schedules of H.E.I.L."

He added that somehow or the other, there had been slippages in the civil works as a result of which they could not use the machine.

4.40 The Committee pointed out that against items 13, 14 and 15 of Annexure III of Audit Report it was mentioned that heavy casting had been considerably delayed. The runner castings were still awaited. The Secretary of the Ministry stated :

"I would submit that this is something which was brought to my notice forcefully, day before yesterday. What is happening is that for the Castings and for forgings of various equipments, we are depending on either indigenous suppliers or outside suppliers. For these castings and forgings the skills had to be developed in the country. Now, day before yesterday, when I was in Bhopal I was able to see a number of castings which have been supplied by such well-known parties like Mukund Iron & Steel Co. Somehow or the other, from the well known producers of castings and forgings, which when they start machining, you find there are some defects in them, you have to reject them and you have to request them to supply fresh items in place of defective ones. The point is that in industry of this nature, some sort of supporting industries have also got to develop side by side. Now that they are taking time and sometimes even castings and forgings which he had ordered long time before on foreign manufacturers they are also delaying the supply.

I would submit that with the best of intentions, things like this happen. Suppose at the machining stage, etc. we find them to be defective, then it natrually upsets all our working schedule. This, of course, takes a little time. The well-known companies in Indian and abroad which are making forgings and castings for us; have also to develop this skill particularly in India about giving the type of forgings and castings that we need and gradually they are coming up. We have inspectors there, we have our people there but gradually it is coming up and it will take some time more. In the country various ancillary industries have to develop in order to help the Heavy machine building factories. This can successfully work. After all heavy machine building factories cannot produce everything they need. Now, in a developing country, any development can be successful provided ancillary industries are also developed side by side so that the requirements of the big industries, according to the needs which may arise, are supplemented by the ancillary industries, for example, Mukund Steel had developed the capacity to make these forgings and castings, according to the turbine. This was not possible before because there were no purchasers for them then. We can also start developing this special type of castings and forgings etc. but it would be easy if these things are manufactured by the ancillary industries. I think, perhaps, that is the best way of planning."

4.41 The Committee observed that there was lack of forsight and non-co-operation between the various Departments and the Government sectors and that had it been an individual concern, every body would have come forward and done the work quickly. The Committee then wanted to know the names of foreign firms which had failed in the matter of supply of castings and forgings.

The Secretary of the Ministry stated:

"There was a delay of 15 months in the supply of casting. It will be very dangerous to give you the assurances. Actually the collaborators say that they have to cut the drawings in U.K. and therefore, they are not able to make them available in time."

Delay in Manufacture and Delivery of steam Turbines.

4.42 Regarding the delay in manufacture of steam-turbines, the Secretary of the Ministry of Industrial Development stated that there had been delay and difficulties in getting the various components and ancillaries like casting, forging and bearing and things like that. He further explained:

"Regarding supply of bearing, we are getting it from SKF which is one of the world's well known bearing manufacturers. But they indicated that they were not able to meet the demand and they were not in a position to supply. At that time, we had sent out people to find out, because we had to buy whatever was available and even then our demand was not met. We are now trying to induce the Indian parties to manufacture them. Gradually, we are able to develop this capacity and we are trying to manufacture them in India. We are trying to deal with these problems, but it might take a little more time to get some satisfactory state of supply."

4.43 In reply to a query the witness stated that they did not and could not manufacture these items as no factory in the world making these things can manufacture everything they need in their own factory and under their own roof. Elucidating the point further he stated:—

"These components are necessary, but if you have not got the bearings, then all those components are of no use. If something fails, then all other things which you have got are of no use. We are trying to develop indigenous capacity to meet the situation. I would request you to bear with us a little."

4.44 The Committee enquired whether penalty clause was imposed. The Secretary stated that penalty could be imposed only when they could select such manufacturers who would agree to their condition. In this case when they were requesting for certain kind of casting, ceiling ring etc., they could not impose the penalty.

He further informed the Committee:

"That kind of bearing is not made in this country. We induce one to start with. The difficulty is that our requirement for that particular type of bearing is comparatively small. The number that the company require to make them should be more than our requirement. So it is difficult to impose penalty when you induce anybody to take it up.

There are only two or three well known firms-Timkings and SKF. They have their factories in various countries and probably they are the suppliers of all types of specialised bearings all over the world."

4.45 Asked whether it was not possible to have any penalty clause in any deal for supplies by outsiders. The Secretary of the Ministry stated that he was told that 70% of the agreements entered into for supply by Heavy Electricals (India) Ltd. were with penalty clause but where the supply was less and the demand was more, they were not able to impose penalty.

4.46 The Committee observed that when there was expansion scheme it was found that either targets were not fixed at all or if they were fixed they were not adhered to and wanted to know.

(i) Whether at the time of fixing the targets, all these considerations which were being advanced as explanations were taken into consideration.

(ii) Whether difficulties in getting items like castings, forgings, bearings etc. were not anticipated and taken into account while fixing the price.

(iii) Having considered all these unforeseen difficulties that may crop up once the work started whether anybody was made responsible for sticking to the targets and in the case of non-adherence to the targets whether responsibility was fixed.

In reply, the Secretary of the Ministry said:

"I would like to submit that at the time of making a target or making out our time schedules, we do take into account the conditions as they exist at the time when the time schedule is being drawn up but various things either develop suddenly or you get to know about the deficiencies and delays that are likely to occur in the country when you start using those things. For example I was mentioning about Mukund Iron & Steel Forgings & Casting Co. This is supposed to be a good party for producing forgings and castings. When you go and ask them about the time, they shall say they will supply within such and such time. We take that into account. When we start receiving forgings from them, we start machining and we find certain loopholes. We could not anticipate them. We have to put up with things that we find. This sort of difficulty develops which you get to know after your targets have been laid down. There may be somethings like certain shortage of steel or certain other types of supplies in the country. It takes four to five months for the steel to come from abroad. We have to set targets on that account. In view of the difficulties which we cannot foresee when we enter into an agreement, delay is caused. Longer time is taken to complete that. Unfortunately it upsets our time Schedule. I doubt very much that we can hold anybody responsible and we have got to live with."

The Secretary assured that the dates mentioned before the Committee would not be revised.

4.47 The Committee then enquired about the position about "Chandrapura I and II." As per programme the first was to be delivered in 1970 and the second in 1971. The Managing Director of Heavy Electricals (India) Ltd. stated that the programme was made four years ago and it was revised according to the progress of the work at site of the project in consultation with the project authorities and the Ministry of Irrigation and Power. He further stated that in September, 1971 it was said that they would deliver the machine in 1972 and informed the Committee that the first machine was being erected. He added that they were discussing with the various project authorities and drawing out delivery programme to suit their construction programme etc.

4.48 The Committee enquired whether the Ministry of Industrial Development was satisfied with the infrastructure available in the project and that there was nothing wrong with it and that the delay was not due to lack of expertise or raw material available in the country.

4.49 The Committee also wanted to know whether the installed capacity was being utilised fully. The Secretary of the Ministry stated that delay on the part of suppliers both Indian and foreign was one of the major reasons but all was not due to it. The Secretary of the Ministry of Industrial Development stated:

"I would admit that in regard to any Ministry or organisation, there is always scope for improvement and I will assure you that I would certainly keep a close watch. In fact, I have been doing this for the last 5/6 months, I have been in this Ministry. Every month, the monthly report of the company comes to me with a D.O. letter and I go through the same as soon as it is received. Wherever I find that there is scope for improvement I do take up with the Company. I will intesify this effort. I must frankly confess that I cannot say that everything possible is being done either in the Ministry or in the company."

4.50 The Committee enquired whether at the time of appointment of engineers and Managers etc. at the responsible position, their performance was linked with their employment or they were assured of the security whether the targets were completed or not. The Secretary informed the Committee that jobs were being linked with the performance of the officers.

4.51 The Vice-Chairman, CW&PC offered to give background information for an understanding of the problem in proper perspective and stated:

"As I said, I am at the receiving end, so I am viewing the problem from that angle. When we drafted the 4th plan, naturally we set a target. We did so on the delivery promises of the manufacturing units in the public sector and on that basis we planned. Now in the field of electricity, there are two different and distinct categories *i.e.* hydro and steam. In the field of hydro, as Mr. Lal said where the delivery shifted, simultaneously due to various other reasons, the programme for civil works also shifted and delay in delivery of equipment did not cause the shifting of the end point. In some cases, although the civil works have gone ahead, the machines could not be supplied. In some cases, they have produced the machine, but there have been delays in the civil works and they have had to store it.

In the field of steam turbine, the production today is rather slow and I feel that we should step it up by our efforts, because it would be very difficult to meet the requirements of the programme that we have chalked out for the next decade, if we progress at this pace. I have been discussing this matter with the HEIL regarding the stepping up of the team turbine. We need quite a lot. About 15 machines, we have to instal in the next few years and the capacity that has been developed so far cannot meet this requirement. Something has to be done. I am not quite sure whether they have got all the facilities to meet the requirements of the country as projects in the Five Year Plan, and for the future. This is my humble submission."

Penalty Clause

4.52 The Committee pointed out that when machinery was supplied to Heavy Electricals (India) Ltd. they did not charge any penalty but when they were behind schedule in supply of machinery to their customers, they paid penalty for it. In reply the Secretary of the Ministry stated:—

"In about 70% of our agreements, there is a penalty clause for delay in supply to us. But as I submitted yesterday, where an item is either manufactued by only one or two parties or we ourselves are trying to induce parties to take up some new item of manufacture for us, there they, more or less, dictate to us the terms. We also in reason cannot impose a penalty because they are going to develop something new and they do not know the difficulties of production. But in 70% of our orders of supply of equipment and material to us, there is a penalty clause."

4.53 In reply to a question the witness said that formerly, the Heavy Electricals (India) Ltd. would not accept any penalty clause but they had started accepting it.

4.54 Asked as to who were their customers to whom they were required to pay a total sum of penalty amounting to Rs. 8,43,617.50, the Secretar y stated:—

"By and large these would be Electricity Board, Bhakra Nangal Project etc. Out of this 8 lakhs, we have by talking to our customers, got over all the other claims except only about 32,000 rupees, for which the negotiations are still going on. They have not been rejected by our customers finally. The rest have all been waived off."

He further explained that their customers are not private parties and they succeeded in convincing them for waiving the penalty and thus only claims worth Rs. 83,000 had been left.

4.55 The Committee then enquired about the terms of reference of the Committee constituted by the Ministry of Irrigation and Power to watch the progress of manufacture and to go into delays in supply of electric generating equipment by HEIL/BHEL. The Secretary of the Ministry informed the Committee that,

"This is a review Committee which meets from time to time and reviews the progress of manufacture *vis-a-vis* in the various projects. This Committee has been set up by the Ministry of I&P and this is a sort of co-ordination meeting in which they try to see that no project is delayed on account of delay in the manufacture. Where civil works are making rapid progress, something can be diverted to that project and things like that. There are no terms of reference of this Committee as such. It was constituted by an order of the Ministry of Irrigation and Power. If you want that order, I would make it available, Sir. This is a constant committee which sits on the review and progress of manufacture *vis-a-vis* progress of projects."

4.56 The Committee find that according to the reports submitted to the Management Committee on 18th September, 1969, 49 important orders relating to Industrial Machines, Switchgear and controlgear, heavy plant, industrial application transformers, flange proof motors, hydro plants were running behind schedule. These cases fall under three broad categories viz. **(i) where customer cancelled the order placed by him; (ii) where the despatch of the goods was deferred at the instance of the customer and (iii) where the despatch could not be arranged because the associated equipment was not ready. The Committee were informed that the main bottleneck in ensuring timely manufacture of turbines was delay on the part of foreign and indigenous suppliers in supplying castings and forgings and special types of bearings required for the manufacture of turbines or supply of defective castings and forgings which had to be got rectified. The Committee failed to understand why there was lack of foresight and co-ordination between the various departments and Government sectors which were responsible for such delayed deliveries. The Committee recommend that Government should provide all assistance to indigenous suppliers to develop their Capacity to manufacture such important parts like forgings, castings and even bearings which are essential products in the manufacture of power equipments so vital for the achievement of the Power Plan. The Committee also recommend that Government may consider the Feasibility of obtaining castings and forgings of required specifications from other public undertakings like the H.E.C.**

C. Effect of delay in production on Power generating and Distribution Programme

4.57 During evidence, the Committee observed that lack of development of electricity machines was causing lack of development all over as electricity is the prime mover of industries. The Committee asked the Vice-Chairman of the Central Water & Power Commission who is also one of the Directors of Heavy Electricals (India) Ltd., to send a note in writing regarding the progress made by the Company particularly in respect of manufacture and supply of equipment for various projects in the country.

The Vice-Chairman of Central Water & Power Commission accordingly furnished the following information after the evidence:—

"The Fourth Five Year Plan envisages commissioning of 9.2 million KW of additional generating capcity to achieve an installed capacity of 23 million KW at the end of the Fourth Five Year Plan after retirement of 0.4 million KW of old and obsolete generating units. Out of 9.2 million KW of additional generating capacity, the indigenous manufacturers HEIL/BHEL, are to supply the generating units aggregating to 4.9 million KW, including 0.2 million KW of Nuclear unit. The break-up is as follows:—

Name of indigenous manufacturer	Hydro		Thermal	
	No. of units.	Total capacity	No. of units.	Total capacity
		Mill. KW		Mill KW
H. E. I. L. . .	30	1.5	9	0.72
B. H. E. L. Hardwar .	15	0.6	6	0.60
B. H. E. L. Hyderabad . .		..	15	1.30
	45	2.1	30	2.62

Heavy Electricals (India) Ltd. have so far, completed deliveries of 10 Hydro units, aggregating to 0.25 million KW and 4 Thermal units, aggregating to 0.21 million KW, BHEL Hyderabad have completed deliveries of 5 Thermal units, aggregating to 0.27 million KW. Thus, to achieve a target of 23 million KW by the end of 1973-74, the indigenous manufacturers have yet to supply the following generating units:—

Name of indigenous manufacturer	Hydro		Thermal	
	No. of units	Total capacity	No. of units	Total capacity
		Mill. KW		Mill. KW
H. E. I. L. . . .	20	1.29	5	0.51
B. H. E. L. Hardwar . . .	15	0.6	6	0.60
B. H. E. L. Hyderabad	..	..	10	1.03
	35	1.89	21	2.14

The foregoing indicates over-all position regarding orders placed with "indigenous manufacturers."

4.58 The effect of delay in delivery of equipment to be supplied by Heavy Electricals (India) Ltd., on completion of various hydro and thermal projects in the country is indicated in the following two statements :—

Statement showing effect on Project completion due to late delivery of equipment for Hydro project, by H.E.I.L.

Name of Project	No. of units and capacity included in Fourth Plan MW	Date of placement of order	Delivery promised in July' 67 for 4th Plan formulation	Latest revised delivery schedule as indicated in June, 71.	Effect on Project completion.
1	2	3	4	5	6
1. Obra Hydel	3x33	1962	I 5/68 II 6/68 III 8/68	...	The delay in supply of equipment affected the completion of the project as per schedule. (All the three units commissioned after deliveries were actually completed in 1969-70 and 1970-71).
2. Yamuna II (Chibro P.S.).	4x60	1964	I 6/69 II 1/70 III 7/70 IV 9/71	Delivered except main shaft etc. 9/71 4/72 6/72	The delay in supply of equipment affected project completion.
3. Ukai	4x75	1965	I 4/71 II 8/71 III 4/72 IV 7/72	1/73 6/73 12/73 3/74	The delay in delivery of equipment will consequently delay project completion.
4. Beas Unit I (Dehar P.S.).	1x165	1965	71/72	3/1973	The delay would affect the completion of the Project. (The delivery is likely to be shifted further.)
5. Upper Sindh	2x11	1966	I 3/70 II 5/70	2/72 3/72	The delay in delivery of equipment will consequently delay project completion. (Delivery is likely to slip back further).
6. Sharavathi, III	2x89.1	1968	I 72-73 II 72-73	3/73 3/73	Out of two units the completion of one unit would be delayed. (HEIL) have indicated that delivery of one of the units may be delayed further.)
7. Ramganga	2x60	1968	I 11/70 II 7/71	10/72 4/73	The completion of the project will be affected due to delay in delivery.

Statement showing effect on project completion due to late delivery of equipment for Thermal Project by HEIL.

Name of Project	No. of units and capacity included in Fourth Plan MW.	Date of placement of order	Delivery promised in July 67 for 4th Plan formulation	Latest revised delivery schedule as indicated in June, 71.	Effect on Project completion.
1. Parili	1x30	1964	I 67-68	8/71	The completion of the project has been delayed. (Delivery since completed in October/December, 1971).
2. Chandrapura	2x120	1968	I 3/70 II 11/70	9/71 9/72	The shift in delivery has only marginally affected the commissioning of the 1st Unit. The Project works have also slipped back due to shortage of materials.
3. Namrup	1x30	1968	12/70	3/72	The shift in delivery has delayed the completion of the project.

4.59 The foregoing two statements reveal that the completion of 6 Hydro Projects and 3 Thermal Projects in the country has either been delayed or would be delayed due to non-adherence of delivery schedules by the Heavy Electricals (India) Ltd., This analysis indicates that generation of nearly 1425 MW of power has been shifted back. The delay caused in the completion of various projects ranges from one year to three years and five months. The Committee note that for commissioning of 9.2 million KW of additional generating capacity HEIL and BHEL are to supply generating units aggregating to 4.9 million KW including 0.2 million KW of neuclear unit. The HEIL is to supply 30 Hydro units of 1.57 MW and 9 thermal units of 0.72 MKW According to the schedule of delivery HEIL is yet to supply 20 units of 1.29 MKW hydro sets and 5 units of 0.57 MKW of Thermal sets. Due to delay in delivery of the sets ranging from 12 to 41 months, completion of 6 hydro Electric projects and 3 thermal projects have been/will be delayed and consequently generation of 1425 MW of power has been put back. The Committee regret to note that the latest revised delivery schedule indicated in June, 1971 is likely to slipback further in some cases. It need hardly be pointed out that such delays have affected the growth of industrial production and investment both in public and Private Sectors besides having other implications. In the first instance the Company will be put to a financial loss due to payments of penalites to the customers under the penalty clause. Secondly, the confidence of the customer is shaken by not getting timely supply of the equipment which ultimately affects order position and the reputation of the Company. The Committee, therefore, emphasise among other things, the need for advance planning and closer coordination between the manufacturing units and Electricity authorities. The Committee

strongly recommend that the Government and the Board of Directors of Heavy Electricals (India) Ltd., should keep a special watch on the progress made by the Company from month to month, identify the causes of delay and take remedial measures without delay.

4.60 The Committee also recommend that since Heavy Electricals (India) Ltd., is engaged in manufacturing heavy equipment for the power generating projects under the administrative, control of Ministry of Irrigation and Power, Government may consider the advisability of transferring the administrative control of the Undertaking from the Ministry of Industrial Development to the Ministry of Irrigation and Power which is responsible for generation, transmission and development of power in the country.

D. Off-Loading

4.61 In order to adhere to the delivery schedule, the Company also off-loaded orders of the value of Rs.53.94 lakhs during 1968 and 1969 and of the value of Rs.2.50 crores during 1970-71 to other manufacturers, both in India and abroad. Economics of placing the orders for such components *vis-a-vis* the cost of production and sale price were not worked out by the Management. The delivery period has also not been adhered to by the suppliers in some cases defeating the very purpose of off-loading.

In view of the complaints regarding non-adherence to the delivery schedule for manufacture and supply of electricity generating equipments, the Government of India have appointed a Committee to watch the progress of manufacture and to go into delays that have occurred or are lilkely to take place.

4.62 During evidence, the Committee enquired if approval of competent authority was obtained before off-loading the works to outside parties in order to adhere to the delivery schedules. The Managing Director of the Company stated as follows:—

"It is not that we are doing this for complete items which we manufacture through somebody else. There is a Fabrication Department. This is required to produce 4,000 tonnes. We feel we may produce 3500 tonnes. That 500 tonnes fabrication which we need for that year's production in other divisions we off-load. Suppose a certain type of sheet is not available I cannot buy in the black market."

4.63 The Committee enquired whether it would not be profitable to pay more in the open market for which they would get cash-memo instead of wasting 2 years. The Managing Director stated that in the market they barter their sheets with those they needed to help their production going. He said that they could not buy in the open market, and that in their accounts it was reflected as barter. He also informed that there was a "Purchase Committee" which went into such transactions.

4.64 In a written reply furnished after the evidence, the Heavy Electricals (India) Ltd., have stated that all off-loading is done according to normal purchase procedure that is with the approval of competent authority

4.65 It has been indicated that the total number of contracts for Power Plant to be helped by this off-loading is about ten. They were able to improve the slippages by off-loading which would have otherwise occurred though all the deliveries originally scheduled were not adhered to. There would have been delay between 24 to 30 months from the original delivery schedules had this off-loading not been resorted to.

4.66 The Committee enquired how was the reasonableness of rates quoted by the suppliers determined when the estimated cost of producion of similar items in the factory was not worked out. The Management stated in reply that the rates quoted by the suppliers were very closely studied and *vis-a-vis* their own estimate. Only when the rates were reasonable keeping in view the seriousness of slippage that would have otherwise occurred, the orders were placed by the Company.

4.67 The Committee cannot look with equanimity the fact that in order to adhere to the delivery schedules, the Heavy Electricals (India) Ltd. had to off-load orders of the value of Rs. 53.94 lakhs during 1968 and 1969 and of the value of Rs. 2.50 crores during 1970-71 to other manufacturers both in India and abroad. The Committee recommend that both the Management of Heavy Electricals (India) Ltd. and Government should go into the reasons for which the Company have to go in for 'off loading' and should take remedial measures to speed up their production in order to obviate 'off loading'. The Management should, of course, ensure that the cost of manufacture in their factory itself should be at least competitive if not lower than what it costs by 'off loading'. During evidence it was revealed that at times the Company resorted to barter deals by exchanging steel sheets available with them with the sheets which they needed. These deals were entered into and even reflected as such in the accounts of the Company. The Committee cannot see why it should not be possible for the Government to see that the Company is assured of supply of material needed by it to keep its production going especially when such material is available in the open market. The Committee recommend that Government should look into such difficulties of the Company as this and help them to overcome them without delay.

E. Defective Works

4.68 The expenditure incurred on the rectification and replacement of defective works during the last three years was as under:—

Code	Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
041	Defective Purchase	51,660	24,310	38,886		
042	Defective Material	52,531	56,427	72,859		
043	Defective Workmanship	2,08,477	2,86,736	4,95,856		
044	Defective Design	12,917	12,458	22,608		
	Total :	3,25,585	3,79,931	6,30,209		

No record showing the value of works found Defective on inspection, which required rectification, was maintained to enable a comparison with the value of output from year to year.

4.69 During evidence, the Chairman on Heavy Electricals (India) Ltd. explained :

"On the shop floor, certain items have to be rectified. That is a normal feature where there is a rigid control and inspection. The quantum of defective work during 1969-70 was about Rs. 7,12,000/- out of which Rs. 4,93,000/- was on account of defective workmanship. I submit that this is not a very large proportion of the total production. It is not that it is a completely rejected one. We rectified and utilised this..............In some cases, the items of work are undertaken for the first times. I do not have the details. If you want I can give where the defective work had to be undertaken. In many cases, it may be for the first time. We manufacture coils. Sometimes the insulation is not correct and it gets burnt out and we have to rewire."

4.70 In reply to a question whether they had any proper control and supervision over defective works and also how it compared with the Collaborators' factory in England, the Managing Director of the Company said that:

"These defective works on the shop floor arise out of many reasons. Suppose, a part is to be welded. In many a case, we use ultrasonic testing device because of the quality of the product. An at times, it has to be rewelded. There is a thing which goes as rectification of defective work. In our factory, what we have done is, at every stage, we have experts. So, if a product in the fabrication division is not absolutely perfect, that is rectified there itself; that type of defect only. And there may be drawing errors. May be 1/8th inch wrong. It has got to be remade. There are different types of defects".

4.71 Giving the percentage of defects the witness mentioned that it was approximately Rs. 5 lakhs compared to the gross manufacture of Rs. 25 crores. He further said that if they compared with value added, this figure would represent Rs. 5 lakhs out of Rs. 12 crores.

4.72 In reply to another question the Chairman of the Company stated that the permissible percentage of defective works in such a manufacturing concern in the world was something like 0.1 per cent.

4.73 The Committee pointed out that under 'waiting for work and material' head which contributed to idle time of labour, the amount indicated against 1970-71 was Rs. 10.14 lakhs while in 1969-70 it was Rs.10 lakhs. The Chairman of Heavy Electricals (India) Ltd. explained that when the material was not on time, they would be booked against idle time. Similarly, he said, when the facbricating shop did not produce as anticipated either he did not get the material or his production had fallen down. He further stated that idle time in 1970-71 was Rs. 13.78 lakhs.

4.74 During the evidence of the Ministry of Industrial Development the Committee referred to the question of the loss sustained by HE(I)L due to the large sums spent in-defective purchase, defective material, defective workmanship and defective design. The Secretary of the Ministry stated:

"The loss was Rs. 7 lakhs 12 thousand, out of which 4 lakhs 93 thousand was due to defective workmanship. The figures, I certainly admit, are high but I would only submit that these figures have to be seen in the context of the total purchases made and the percentage that this constitutes because, with the best will I submit that a certain amount of defective material may come in, in spite of our vigilance. Out of the total of 7 and odd lakhs, this constitutes only 41% of the total output of 12.35 crores in 1969-70 and it is only 4.93, lakhs *i.e.* 0.21% in 1970-71. One defect in the matter of this defective material is that we get a lot of castings and forgings from various companies in India. On the face of it, it appears to be all right and has to be accepted, but when we do the machining etc., we find there are holes and have to reject it. This sort of thing, I would submit, is not capable of detection by visual inspection. It is only when we work it and scrap the top surface that we find that there are defects inside and we have to reject it."

4.75 The Committee pointed out that there were X-ray machines which could go through the castings and find out the defects. The Secretary of the Ministry agreed that there were X-ray machines and ultrasonie detectors but he said that these were very expensive machines and at the time of purchase from various companies it was difficult to take these machines there and that they had to take some risk in regard to those items.

4.76 The Committee asked the managing Director of the Company to maintain the records regarding defects found in the equipment purchased so that in future Audit should not point out such a thing. The witness said that if the amount was calculated pertaining to the defects found then there must be some records from which the calculation was made.

4.77 It was observed that the value of the turbine found defective was not shown but it was indicated by the Management that 1 per cent of the total production was the expenditure incurred in renoving the defects. Asked about the value of the product in which defects occurred, the Secretary of the Ministry explaining the position said:—

"I do not know whether that would be very purposeful. Suppose you have a turbine or something like that of the value of Rs. 1 lakh and you have to do some small repair costing Rs. 50/- it is not necessary to show the value of the item costing Rs. 1 lakh in the estimate."

The representative added that those defects were of minor nature otherwise the expenditure would have been much more.

4.78. The Committee find that expenditure incurred on 'rectification and replacement' of defective works has increased from Rs. 3.25 lakhs in 1966-67 to Rs. ***5.79*** **lakhs in 1970-71, a rise of** about 76 **percent. During evidence, the representative of the Ministry of Industrial Development stated** inter alia. **"I submit that a certain amount of defective material may come in, in spite of**

our vigilance." The Committee cannot see why there should be such a high rate of increase. If the vigilance is effective, defective material should be negligible. The difficulty however is that castings and forgings are accepted by Heavy Electricals (India) Ltd. on "visual inspections" only and when the top surface of it is scraped, it is only then that some times defects come to notice. The representative of the Ministry admitted that there were X-ray machines and Ultra-sonic Detectors which could go through the Castings and throw up the defects but he thought their use would not be advisable. First, these machines were stated to be expensive. Secondly, it would be difficult to take these machines to the companies from whom castings and forgings are to be purchased. The Committee recommend that the possibility of use of these modern devices for detection of defects in the castings and forgings should be explored further in consultation with other public undertakings who use castings and forgings. The point to be considered is whether one should go in for these modern machines once rather than waste money and time year after year on rectification of defective works.

F. Idle Time

4.79 The table below indicates the total direct wages as booked *vis-a-vis* the idle time during the last three years:—

(Rupees in lakhs)

	1966-67	1967-68	1968-69	1969-70	1970-71
Direct Wages as booked	54.35	61.61	67.00	66.97	85.89
Idel time	8.87	10.74	11.58	13.26	13.78
Percentage of idle time to total direct wages as booked	16.3	17.4	17.3	19.8	16.00

The various factors contributing to the idle time and the extent of contribution of each of the major factors are indicated in the table below:—

Year	Waiting for machine	Waiting for power	Waiting for cranes	Waiting for instructions	Waiting for work and material	Total
1966-67	1,00,140	28,067	31,798	49,068	6,77,844	8,86,917
1967-68	1,23,797	21,259	32,038	57,759	8,39,622	10,74,475
1968-69	1,24,531	22,544	44,505	70,510	8,96,089	11,58,179
1969-70	1,40,705	17,483	55,274	84,214	10,28,888	13,26,564
1970-71	1,40,000	19,000	47,000	1,58,000	10,14,000	13,78,000

It will be seen that the absence of work and material accounted for roughly 73% of the total idle time during the last five years.

4.80 The Ministry have stated (May, 1970) that "Development of supplies is a major problem to this industry......................All efforts are being made to overcome these difficulties."

4.81 The Committee asked if it was not anomalous that while on the one hand the Company was unable to adhere to delivery schedules in the execution of orders, on the other hand, substantial portion of the available time of the workers remained idle particularly on account of absence of work and material. In a reply furnished after the evidence, Heavy Electricals (India) Ltd. have stated that theirs was a factory of multiple products and the shops had been laid out in accordance with the sequence of work for each product. The jobs undertaken by them were specific to the requirement of each customer and as such it was possible that even with a minor imbalance in work scheduling, there will be work areas which will be idle on account of the delay of the jobs that may have occurred in the earlier work centres. It was further explained that lack of materials may account for idle time in the areas that process the job initially. The idle time in other areas was on account of the imbalance in the production flow and since it was a very large engineering complex manufacturing thousands of details in various work centres, idle time in specific areas on account of imbalance in the work-flow was inevitable. The Management however stated that the matter was constantly engaging the attention of the Production Control and Manufacturing Supervision in each Division with a view to reducing the idle time as much as possible.

4.82 Asked whether idle time indicated technological gap, the Management replied that the existence of some amount of idle time was a normal feature of any manufacturing industry and in their case it did not indicate any technological gap.

4.83 The Management also stated in a written reply that they were very much conscious of the existence of the idle time and that the position was reviewed of very often with a view to ensure better production planning so as to keep the incidence of idle time within possible minimum limit.

4.84 **The Committee note that percentage of 'idle time' in Heavy Electricals (India) Ltd. to total direct wages as booked had been ranging between 16.0 to 19.8 Absence of work and material accounted for roughly 73% of the total idle time. The Committee find that idle time is occasioned in specific areas due to imbalance in the work-flow. The Committee recommend that work scheduling should be planned on a realistic basis and planning and product control machinery in the Heavy Electricals (India) Ltd. should be geared up so as to minimise idle time. It is hard to understand much less justify that an undertaking like Heavy Electricals (India) Ltd. which is unable to conform to its delivery schedules should have idle time as high as 20 percent.**

G. Plant Utilisation

4.85 No procedure had been prescribed for the compilation of statistics at regular intervals showing the idle machine hours of heavy and costly machines with a view to take steps for effective utilisation. In this connection, the Bureau of Public Enterprises observed as follows:—

"The introduction of the composite machine hour rate would indicate the un-utilised time of each machine and the loss due to such under-utilisation, the causes of which may be looked into and suitable remedial measures taken in time. If necessary the composite machine hour rate of each machine or group of machines may be reviewed periodically so that all variations that have since taken place may be given effect to. In order to have the full benefit of machine hour rate, it is necessary that the standard time taken for each operation may be pre-determined and this should be compared with the actual time taken and the causes for variations looked into."

4.86 The Ministry have stated (May, 1970) as follows :—

"Columns have been provided in the job card for recording Machine and Machine group numbers. The effective working hours of each machine/machine group could be processed on the data processing equipment. This is not being done at present mainly due to:—

*(a) Inadequate capacity of the available data processing equipment.

(b) Installed capacity of the production shops not being reached and machine tools being engaged but not efficiently utilised due to lack of development of ski /speed of the operations.

However, a system of collection of data on a selective basis for larger machines is being introduced.

(c) As regards steps for effective utilisation, taking outside jobs is a a possible course. But we could not take outside jobs on a large scale mainly because we could not get suitable jobs. Also time scheduling and booking the large machine tools for outside jobs was difficult tricky and might have resulted in holding up our own production of turbines and generators."

4.87 During evidence the Managing Director of Heavy Electricals (India) Ltd. stated:—

"The production control does it. In our factory the principle is—one machine, one man. We have a job card system where the artisans number is recorded. Manufacturing order number is recorded. The number of hours worked is recorded. The number of idle hours he is having is also recorded. Then waiting time for material, waiting time for instructions, waiting time for other things—everything is recorded. The machine and the man are related. I have got a card which, I will show to you. The card contains machine number. If man is idle, machine is idle."

*According to Audit a new Data Processing Machine was installed in July 1970 which was not being utilised to its full capacity due to limitation of other allied machines.

In reply to a question, the witness said that they had got every heavy machine loaded up and there were detailed charts and they knew how much each machine was working and that they had got detailed time analysis.

4.88 The Committee enquired if they could find out for how much time a machine was used and for how much time it was idle. In reply the witness stated:—

"Yes, we know it. We know the idle time of the man. He is working on that machine. We don't do it on the machine itself......... we have got the card system all the time. What they refer to is collection of data from these cards which is being done."

4.89 The Committee suggested that if they could find out idle hours of machines, it was possible to utilise their idle capacity by taking up outside jobs even from private industry. The Chairman of of Heavy Electricals (India) Ltd. thought that it should be possible to extract this information by putting through data processing machinery. He also added that they were thinking of going in for a computer for the purpose.

4.90 During evidence of the representatives of the Ministry of Industrial Development, the Committee asked how the non-introduction of the system of recording the actual utilisation of heavy and costly machines even after a lapse of 8 to 9 years could be justified. In reply the Secretary of the Ministry stated:—

"Actually in regard to this position, we have a sort of job card and in that card system, the actual time taken by each machine is recorded. But there is a lacuna in this system, that is, we do not have a readily available system in which the utilisation of each machine as such is also indicated. There is also a column showing how much time is taken by a machine. As far as the workmen are concerned, there is a job card which not only indicates the amount of work the workers themselves have done but also indicate how much time a machine has taken. Having got the information regarding machine-wise utilisation and other particulars, you have got to pool this information in various cards of various workers in order to find out how much work is done. I think this system has to be introduced."

4.91 In reply to a question, the Secretary of the Ministry stated that the Superintendent at the floor had the knowledge about the utilisation and non-utilisation of the machines but he said he favoured the system in which there was a record to know which machine was utilised fully and which was not being utilised fully.

4.92 Asked whether any assessment was made from the job cards regularly as to which machine was utilised fully and for how much time and what was a idle time etc. as for example, a log book kept for a car indicated, the Managing Director of Heavy Electricals (India) Ltd. stated:—

"We have informaion on the job card we have the data processed which extracts the idle hours of the man doing the job. We

do not have sufficient capacity on the data processing machines to extract this additional information on machine utilisation. We do agree that machine utilisation is necessary but when we get a computer which we are processing now, we shall be able to extract this information. It is not that we do not want to do it, actually we want to do it."

Asked when they expected to instal the computer, the Managing Director informed that they had the approval of the Board and now the proposal had been placed before the Government.

In reply to a question the Managing Director assured that there could be no retrenchment of workers following the installation of a computer.

4.93 In a written reply furnished after the evidence, the Management of the Company stated regarding Plant utilisation as follows:—

"The system of pre-determining the standard time for each operation has been introduced with the start of the incentive scheme in our factory since early 1965. As most of our shops have been covered by the Incentive Scheme, there exists a regular system by which the actual time taken for each job is compared with the standard time. Currently, the *average efficiency on the basis of standard is about 70 to 75%.

In Heavy Electricals factory, each machine is manned by one or more direct workers, and a detailed system of reckoning the idleness of the direct workers has been in operation since the commencement of the factory. Hence the incidence of idle time as reflected for each worker would be a sufficient index of the utilisation of plant and machinery as well. The system of a reckoning idle time has been constantly reviewed from time to time by the Works Management who are of the view that the existing method of reckoning idle time is adequate for the present. As soon as the new electronic data processing system is installed a system of working out idle time for each machine will be introduced. It may be pointed out that the shops are laid out separately for each product and according to sequence of operation. The Consultants have also worked out the capacity of each shop in terms of physical outputs. In such an arrangement the utilisation can differ from machine to machine since the objective is to obtain the maximum equipments in the aggregate."

4.94 The Committee regret to note that despite the observations of the Bureau of Public Enterprises about the utility of introduction of the composite machine hour rate, the Management of Heavy Electricals (India) Ltd. have been content with "Job Card System" which recorded the work put in by a workman but not the machine hour rate. During evidence the representative of the Ministry of Industrial Development admitted "But there is a lacuna

*According to Audit, it is not clear how this efficiency has been calculated when the actual utilisation of machines is not being complied. It is also not clear how it is stated that 40 to 50 large machines were found faulty, loaded in Ist and IInd shifts when the existing data recording facilities do not render the compilation of the actual utilisation possible.

in this system (*i.e.* job card system), that is we do not have a readily available system in which utilisation of each machine as such is also indicated ... I think this sytem (*i.e.* machine "hour system") has to be introduced" The Managing Director of the Company said "We do agree that machine utilisation is necessary". It is surprising that though Heavy Electricals (India) Ltd. have been in existence for more than 15 years, they have not thought of introducing machine hour utilisation system. This system should be introduced without further loss of time because it will enable the management to guage the extent of under utilisation of machines and explore the possibility of undertaking jobs for others.

Government should take an early decision on whether or not Heavy Electricals (India) Ltd., should go in for a computer.

H. Manpower Analysis

4.95 (a) The staff actually employed by the Company during the last 3 years is compared as under:—

	As on				
	31-3-1967	31-3-1968	31-3-1969	31-3-1970	31-3-1971
A. Factory Department					
1. Senior Supervisory (Officers in the scale of Rs. 700-1,250 and above)	246	276	276	291	311
2. Junior Supervisory (other Officers and including Foreman, Asstt. Foreman. down to charge hand and equivalents)	1,667	1,815	1,887	1,884	1,972
3. Skilled, semi-skilled Artisans and Draughtman	7,834	6,877	6,990	7,174	7,503
4. Unskilled labour on production and maintenance work	1,852	1,980	2,044	2,080	1,968
5. Production clerks, Cost Accounting and Store-Keeping Staff, Canteen workers, etc.	1,368	1,623	1,615	1,621	1,573
6. Security Staff	348	395	420	418	432
B. Non-Factory Departments					
1. Staff in Administrative Departments (like Personnel, Accounts, Secretariat)	1,287	956	912	867	887
2. Staff in Township (Civil and Electrical Maintenance) and Medical	1,003	1,046	1,096	1,169	1,199
Total :	14,605	14,968	15,240	15,504	15,845

Besides the above regular staff, there were 601 work-charged and daily rated employees as on 31st March, 1969 (1,057 on 31st March, 1968).

4.96 The Consultants in their report for the period ending November, 1969 observed as follows:—

"Reference to the personnel data of Bhopal factory indicates that there are 1,887 junior supervisors overseeing the work of 10,649 lower grade workers in both works and offices. This shows a ratio of 5.6 workers per Supervisor.

Reference to figure in respect of the previous year shows a ratio of 5.8.

A reasonable ratio for an established factory would be of the order of 9.5 workers per Junior Supervisor and this should be reached in Bhopal when the final two departments *i.e.* Heavy Plant and Steam Turbines are fully established in, say, two years' time. At the present time when Switchgear Transformer, Motor Capacitor and the Main Feeder Departments have already been established for at least 5 years the overall ratio of workers to Junior Supervisors should already have reached about 7.5 to 1."

4.97 In their reply the Ministry stated in May, 1970 that the Consultants have made the comparison of the total Junior Supervisory Staff *i.e.* the supervisory staff upto the level of officers in the grade of Rs. 400-950 with the lower grade workers. This may not be correct as the Engineers in this grade working in the design department do not usually supervise the work. Further there are other areas where work is done at the level of supervisory grade. If the supervisory staff working in these places is excluded and then a comparison is made with the number of workers the ratio will work out to 11.6:1 (6316 to 542) as on 31-3-1969.

4.98 During evidence the Chairman of Heavy Electricals (India) Ltd. explained :—

"I would submit that the consultants' figures included all supervisors. They struck a proportion including the drawing office staff etc. If you take the shop floor, the supervisory staff as compared to workers, we arrive at a ratio of 12.7:1."

In this respect it was observed :—

"If the consultants have taken all the supervisors, irrespective of whether they are in the drawing office etc. and arrive at a ratio of 9.5:1 even if you take all supervisors and others in the drawing office, the figure should come the same."

The Chairman of the Company replied as follows:—

"I submit, sir, that for comparison of supervisors with the effective workers, we should go by the proportion that we have on the shop floor; that is really relevant. In the case of drawing office who are supervisors and who are the actual draftsmen etc.

there could be an argument what categories they had in mind, when they recommended a proportion of 9.5 to 1 and what categories they have taken here as doing the supervisory work, we do not know. What is really relevant is the supervisors on the shop floor, where we have reasonable proportion of supervisors as to the staff on the shop floor."

It was pointed out that a norm had been given in the Consultaants' report but it could be compared only if they knew the norm in other countries. The Chairman of the Company said that the ratio 12:1 was on the high side and that they should have more supervisors on the shop floor.

4.99 Elucidating the position further the Management of the Company stated in a written reply furnished after the evidence that a comparison had been made by the Consultants of the total 'Junior Supervisory Staff, *i.e.*, Supervisory Staff upto the level of officers in the grade of Rs. 450—1075- with the 'lower grade workers'. This according to them, may not be strictly correct because, engineers in the design department in the grade of Rs. 450-1075-were actually engaged in design work and did not usually supervise the work. There were other similar areas where actually work was done at the level of supervisory grades such as production planning process and rates etc. It was further stated that for the purpose of appropriate composition, the total actual number of workers being supervised had been segregated and also corresponding supervisors. On this basis the ratio was considered very reasonable and they said it compared favourably with similar organisations in this country.

4.100 The Management further informed the Committee that in their final report submitted by the Consultants in December, 1970 there was no observation in regard to the ratio between workers and supervisoss.

4.101 In reply to the question whether any further recruitment/promotion in the grade of Junior Supervisors was made even after the views expressed in this regard by the Consultants in November, 1969, the Management stated :

"There has been no recruitment of Junior Supervisory staff (Assistant Foreman etc.) from outside during the five year period 1964 to 1969. Recruitment was, therefore, commenced on a limited scale to replace wastages as well as to meet requirements in new areas of production and 20 Assistant Foremen (who supervise the work for artisans) were absorbed after training in the year 1970 in manufacturing areas. There were also certain other categories of staff of equivalent rank in the design, inspection and site erection areas in addition to the above."

The number of promotions made to the cadre of Junior Supervisory staff (chargehands) in the manufacturing areas is as follows :—

1970-71	62
1971-72	66

As against the above, recruitment has been made also in the artisan cadre every year to replace wastages as well as to meet the requirements in new areas of production and increased output. Thus the increase in the number of junior supervisory staff has not actually contributed to decrease in the ratio. The ratio of junior supervisory staff to workers in the manufacturing areas in March, 1969 and August 1971 is almost the same and is given below :—

	March 1969	August 1971
Ratio of first line Supervisors to Workers	1: 14.61	1: 14.4
Ratio of Junior Supervisors (taking into account junior officers as part of junior Supervisory staff to workers)	1: 11.2	1: 11.2

4.102 The Committee note that in their report for the period ending November, 1969, the consultants had pointed out that there were 1887 junior supervisors at the Bhopal factory overseeing the work of 10,649 lower grade workers in both works and offices, the ratio being 5.6 workers per supervisor. During evidence, the representative of the Heavy Electricals pointed out that the Consultants had arrived at that ratio by including even the supervisory staff working in their Design Office. At the shop, the ratio was about 12.7 workers per junior supervisor. The present ratio (as on August, 1971) at the shop floor is stated to be 11.2 workers per junior supervisor taking into account junior officers as part of junior supervisory staff to workers. The Committee also note that the ratio of workers to "first line supervisors" was 14.4:1.

The Committee recommend that Government Management may consider fixing suitable and realistic norms for Supervisors/workers ratio on the shop floor at different levels, if necessary with the assistance of Management experts and issue instructions for adhering to such norms.

V

ORDER POSITION

5.1 The products of the Company are custom-built and the range of manufacturing cycle varies from one to three years depending on the product. It is, therefore, necessary that the order book of the Plant should always be full for at least a period of 2 to 3 years, for arranging pre-production activities in time.

5.2 According to the Management, "the order in hand as on 3 March, 1970 will keep the shops busy for 2½ years in the case of Transformer, about 20 months in the case of Industrial Motors, for about 3 years in the case of Traction Equipment and for over 3 to 4 years in the case of Generating Plant.

5.3 As on 31st March, 1970 the Company also participated in about 186 tenders of a total value of Rs. 18.35 crores for export to the various countries including some countries which are not included in the export jurisdiction allowed as per clause XXII of the Main Consultancy Agreement for which special approval of the Consultants was obtained. Fourteen orders for a total value of Rs. 7.7 lakhs have so far been received."

5.4 The order book position as on 31-3-1971 was as given below. The orders have been segregated into major products :—

(All values in Rs. lakhs)

S. No.	Product	Orders pending execution as on 31-3-1971
1.	Switchgear, Controlgear, Capacitor & Rectifier (excluding Trading Control)	1134.94
2.	Traction Control	652.88
3.	Transformers	2350.53
4.	Traction Motors	1634.21
5.	Traction Generators	269.94
6.	Industrial Motors	314.91
7.	Heavy Rotating Plant	4111.00
8.	Water Turbine	2694.00
9.	Steam Turbine	5893.00
	Total	19,055.41

5.5 The number of tenders with the total value thereof in which Company participated for exports upto 31st March, 1971 was as Under:—

1. Number of tenders participated. . . .	320	Nos.
2. Value of tenders participated	2970	lakhs

5.6 During evidence, the Managing Director of Heavy Electricals (India) Ltd. informed the Committee that as on 30th September, 1971, the Company had orders of the value of Rs. 222.45 crores and that the delivery was due during the next 5 years.

5.7 The Committee enquired how many orders for equipment were pending with the Company and when they expected to complete them. In reply, the Secretary of the Ministry of Industrial Development stated that orders were very large and there was a big list. He added that 42 orders for hydro-electric turbines alone were there out of which nine had been supplied and there were orders worth Rs. 222 crores in hand.

5.8 The Committee wanted to know when the orders were placed and what were the target dates given for the supply and whether the Ministry was keeping track to see that the production was going on properly and the dates given to the customers for the supply of machines were being adhered to. The Secretary of the Ministry replied :—

> "I would submit that it is difficult for us to keep track of all individual orders because here alone orders worth Rs. 222 crores are pending and we have to consider something like 500 individual orders for individual items and it may not be possible for the Ministry to keep track of all this. What the Ministry does see to it whether the overall targets of production are kept up and the performance of the Company in relation to its commitment or non-commitment to these targets. But I would submit that it is very difficult for us to keep track of everything. Only the Electricity Board, the Central Water and Power Commission and the Ministry of Irrigation and Power brought to our notice that there going to be some delay."

5.9 Observing that as on 31st March, 1970 the Company had participated in about 186 tenders of the total value of Rs.18.35 crores for exports to the various countries but had been able to secure 14 orders of total value of only Rs. 7.7 lakhs, the Committee enquired the reasons for the value of the actual export orders received being so much less in comparison to the value of tenders participated.

In a reply furnished after the evidence Heavy Electricals (I) Ltd. have stated that till November, 1970, under the existing techical consultancy agreement Heavy Electricals (India) Ltd.'s export franchise was limited to Burma, Ceylon, Nepal and Pakistan: but towards the end of the period it has been extended to Thailand, and Cambodia also though for some products only.

It was further stated that till then all enquiries for restricted areas were to be cleared specifically by the Consultants. The clearance from Consultants came for equipment for which they themselves or other British manufacturers were not serious contenders, either because of the equipment not being based on British Design and manufacturing practices or because of other developing nations being well entrenched in an area, due to political economical influence or due to proximity. HEIL had to quote wherever they could despite disadvantages to get their name in 186 tenders amounting to an average of four to five tenders per developing country, who were their potential customers, a number not altogether adequate to acquaint those countries with their existence and perseverence.

5.10 Heavy Electricals (I) Ltd. have claimed that despite these handicaps their order book for export had moved as follows :———

(figures in lakhs)

1967-68	1968-69	1969-70	1970-71	1971-72 (upto 1.11.71)
0.96	2.1	7.7	42.6	128

5.11 The Ministry of Industrial Development stated in a written reply furnished after the evidence that the HEIL Bhopal under the Agreement with its collaborators Heavy Electricals (India) Ltd. could export only to Burma, Ceylon, Nepal, Pakistan and Cambodia till November, 1970. They participated in a larger number of tenders mainly to gain experience and in those cases where they tendered for territories outside the Agreement, they could do so only with the prior consent of the collaborators. On the expiry of the Agreement, however, it had become possible for HEIL to submit tenders to a much wider clientele, and the present order book for exports has already reached Rs. 1.32 crores. It was also stated that Heavy Electricals (India) Ltd. which had their own initial handicaps were breaking new ground.

5.12 The Committee feel that adherence to delivery schedule is vital in attracting customers in any undertaking for improving the order book position. They note that according to order book position of Heavy Electricals (India) Ltd. as on 31st March, 1970 the shops will be kept busy for only 2½ years in the case of transformer, about 20 months in the case of industrial motors, for about 3 years in the case of Traction Equipment and for over 3 to 4 years in the case of Generating Plant.

The Committee also note that as on 30th September, 1971 the Heavy Electricals (India) Ltd. had orders of the value of Rs. 222.45 crores and that the delivery was due during the next five years. During evidence the representative of Ministry of Industrial Development explained "It is difficult for us to keep track of all individual orders because here alone orders worth Rs. 222 crores are pending and we have to consider something like 500 individual orders for individual items". The Committee are unable to accept the viewpoint of the Ministry. Failure to ensure observance of time schedule and delay in the execution of orders act as inhibiting factors in getting fresh orders from the customers. The Committee, however, recommend that Government should at least review the progress of execution of important orders from time to time

so that difficulties faced by Heavy Electricals (India) Ltd. are identified and Government are in a position to render help to the undertaking to remove the difficulties which retard orderly progress of execution of orders. They also recommend that the undertaking should locate other difficulties, if any, which affect the order position and ensure that they do not recur in future. Most of the customers who place orders with Heavy Electricals (India) Ltd. are organisations in public sector. The Committee do not, therefore, see why it should be difficult for the Management of the Company and Government to embark upon an integrated and detailed planning to ensure that Heavy Electricals (India) Ltd. have at all times, orders for execution from 3 to 5 years which would in turn ensure efficient production in the undertaking.

The agreement entered into by HE(I)L with the Consultants which had put restrictions on export of their products, expired in November, 1970. In the revised agreement no limitations on export jurisdiction of the Company have been imposed. The Committee therefore, strongly recommend that all out efforts should be made both by the Management and Government to attract more orders from other countries and thereby increase exports.

VI

PRICING POLICY AND SALES PERFORMANCE

A. Pricing Policy

6.1. The products manufactured by the Company may be broadly divided into three distinct categories for adopting sales policy as detailed below:—

Products in the competitive range	Products in the semi-monopoly range	Products in the monopoly range
(i) Switchgear and Controlgear, Control and Relay Penals Type II KV to 220 KVI Industrial Control gear, Industrial Rectifiers Metering Equipments.	(i) Transformers, Traction Transformer Freight Loco.	(i) Switchgear and Controlgear, Traction Control DC Do AC Do BG Do MG D.C.Loco
(ii) Transformer-Power Transformer Thermac welders Industrial Transformer Traction Rectifiers EMU Reactors, Rectifiers Transformers, Capacitors (MW and HV).	(ii) Industrial Machine D.C. Machines	(ii) Transformer Traction Transformer EMV Baking Rectifiers.
(iii) Industrial Machines—A.C. Machines.	(iii) Heavy Rotating Plant Large Electric Motors.	(iii) Traction Motors Type 133 AZ/AY Motors Type MG51 generator Type 253 BX Motors Type 165 Motors Type T.G. 5301 generators. Type AG 51 Generator. Type AG 32 Generators (MG) Type 253 AZ Generator (MG) Type TG 109 Generator (MG) Type 253 AZ Motor (MG) D.C. Loco Type 4939 AZ.
(iv) Steam Turbines (Condenser RAPP-220 MW)		(iv) Heavy Rotating Plant Water Turbine Generator Steam Turbine Generator.
		(v) Water Turbine Divn. Water Turbine.
		(vi) Steam Turbine Divn. Steam Turbine, Marine Turbine.

6.2. The note on pricing policy submitted to the Board of Directors in its 106th Meeting held on 18th November, 1968 gives the various elements to be included in working out selling prices from the estimated factory cost (Direct material, Direct labour, Factory overheads based on percentage to Direct labour, engineering expenses and miscellaneous direct charges). In the "monopoly range" where it is possible to establish selling prices, all elements like complaint reserve, packing charges, commercial and administrative expenses, percentage increase for firming the prices and royalty are included in the detailed estimates on the basis of which quotations are given.

6.3. In the "competitive range" where prices are, as a rule fixed by the market levels, a total percentage commercial and administrative charges is indicated in the estimates rather than indicating all elements first, and reducing the total estimate to market level. Recently a system has been introduced under which normal estimate is made (indicating the usual percentage of recoveries) for all the elements of cost, and reducing the price to the market level specifying reasons for such a measure.

6.4. With regard to the fixation of sale prices by the Undertakings manufacturing monopolistic/semi-monopolistic equipment, Ministry of Finance (Bureau of Public Enterprises) have prescribed the following guideline in their O.M. No. BPF/46/ADV.F/68/25 dated 27th December, 1968 :—

(a) The pricing of their products should be within the ceiling of the landed cost of comparable imported equipment.

(b) Within the ceiling of the landed cost, it would be open to the enterprises to have price negotiations and fix prices at suitable levels for their products which would give them a reasonable return on the capital invested. It is desirable that the prices so fixed should be operative for a period of 2 to 3 years.

(c) Ordinarily the landed cost should be regarded as the absolute ceiling. If, however, in assessing the landed cost, there are reasons to believe that the FOB/CIF prices for imported equipment are artificially low or in other exceptional circumstances where cost of production of indigenous manufacture is very high, it may be necessary to have the prices higher than the landed cost; in such cases the matter should be referred to the Administrative Ministry of Finance, Bureau of Public Enterprises.

6.5. Heavy Electricals (India) Ltd. feel that for an undertaking which essentially manufactures custom-built equipment to meet specific requirements, it will indeed be difficult, if not impossible, to make comparisons with the landed cost of imported equipment. Barring certain standard products bulk of manufacture in the monopoly region does not lend itself to such comparisons.

Besides, the Management feels that the price cannot be compared with the landed cost of imported equipment due to :—

(a) higher duties on imported raw materials and components as compared to the duty payable on assembled equipment;

(b) higher basic price for material and components; and

(c) higher range of variations in prices quoted by different manufacturers depending on design philosophy followed and safety margin adopted *e.g.* British manufacturers whose design approach and manufacturing techniques the Company follows by and large, generally adopt liberal design with larger margin of safety resulting in higher cost, while other manufacturers produce more economical designs with very tight margins of safety.

6.6. It has not been possible to work out in financial terms the implications of not adhering to such a ceiling due to non-availability of imported price for custom-built equipment so far ordered on the Company. In March, 1969 the Company, however, submitted brief specifications for the various products to the Ministry of Industrial Development for circulation to various Embassies to get the landed cost of comparable imported equipments.

6.7. As the prices in respect of the products in the "competitive range" are regulated by the principle of what the market can bear, a procedure of quoting selling prices covering only a part of the factory expenses and commercial and administrative charges has been in vogue in the Company. Although no formal delegation has been made for quoting prices for sale of products below the estimated cost of production, the Commercial Department has been exercising full powers in this regard. Even broad guidelines indicating the ceiling of the recovery of the overhead expenditure, that could be forgone from time to time, have not been issued either under orders of the Board of Directors or by the Chairman and Managing Director.

6.8. The Management intimated (December, 1969) that "the quotations made are covered by general approval given by the competent authority for a level of recovery of Commercial and Administrative charges and Factory Expenses on the first estimate on the certain basis. In conformity with this approval and the general guidelines given by that approval for the level of recoveries the other Officers prepare quotations for submission to the customers. Considering the very large number of quotations sent by various Divisions, it is not a practical measure to approach the Chairman and Managing Director in every case for a specific approval. Depending on the market conditions and the level of prices ruling during a period, the minimum level of recoveries for factory expenses and Commercial and Administrative charges are defined and approval taken."

6.9. A formal order delegating the powers to the various officers was issued by the Chairman and Managing Director only on 18th April, 1970.

6.10. As the Chairman and Managing Director of the Company has not so far been authorised by the Board of Directors to re-delegate the powers delegated to him, the delegation order issued by him on 18th April 1970, therefore, is not in order.

6.11. During evidence when asked about the present pricing policy, the Chairman of Heavy Electricals (India) Ltd. explained the present policy as under :—

"There are several factors in the operation of this company which require consideration other than the main formula laid down, that is, landed cost. There is no real thing as a landed cost, for many of the products which are of a unique nature. The fact is that the capital base of the Company has also increased at one time and therefore, the incidence of the capital charges are fairly heavy. We are depending upon large imports for the raw-material required and they also asked for the custom duty sometimes even higher than what would be if the material was imported as a part of the finished machine."

The Managing Director of the Company added :—

"When these foreign companies sell us, they are not keen that we should compete with them. For instance, we are paying only Rs. 4,500 per ton approx. when it comes here. I am not sure what they will charge in their own country for the material for CRGO steel. Similarly, where there is a sort of monopolistic thing, we go for a big casting or forging; we sometimes have to pay Rs. 20,000 per tonne, because they know that we cannot go anywhere and they are not very keen that we should have advantage and compete with them and the prices are very high. Therefore, the prices of our products go up because of these factors."

6.12. The Committee indicated that the Commercial Department of the Company had been exercising full powers for quoting prices for sale of products below the estimated cost of production although no formal delegation of powers had been made to the various officers till April, 1970 and enquired whether this was done with the approval of Government. It was also indicated that the Board of Directors had not authorised the Managing Director to redelegate the powers delegated to him. The Chairman of Heavy Electrical (India) Ltd. stated that when the power was delegated to the Commercial Department to the then Chairman there was no formal order of re-delegation of power by the Chairma to lower authority.

6.13. The Financial Adviser said that it was not a case of delegation of power because the Chairman was a full-time person and the power was being exercised under his supervision.

6.14. When the Committee pointed out two flaws in this respect *viz.* neither the Board of Directors nor the Finance Department was consulted, the Chairman of the company mentioned that it was not required. The Committee enquired whether the Finance Department approved particularly their charging less than the cost price. The Managing Director of Heavy Electricals (India) Ltd. explained the position as follows :—

"We found out that the actual cost was more than the estimated cost. That means we did not have enough experience how much it will take on the shop floor. The estimate was prepared on the facts given by the Finance Department only. This is the only calculation what the sales people do. The Finance Department every year gives us what are the overhead expenses which are to be charged. It is a regular circular issued by the Finance Department. Then the Finance Department also gives us what are the commercial and administrative charges to be allowed. This is a matter of building up and it is done in all divisions and there are hundreds of quotations which are to be dealt with. The Finance Department does not come into the picture."

6.15. The Committee enquired that in the absence of preparing a complete estimate covering all elements of cost at the normal levels, how any control was being exercised by the Management to check that the reduction made was not more than what was authorised or reasonable. The Management of the Company stated in a written reply furnished after the evidence that "the reasonable reduction is that which is dictated by the market level of prices and as such the question of a check to ensure that the reduction made is more than what is reasonable does not arise." The process of reduction was by eliminating profit first and then reducing the commercial and administration charges. Commercial and administration (C&A) charges include various elements like administrative charges, commercial and selling charges, township expenditure, interest on loan, etc. According to the Management it was not necessary to indicate which one of these charges was being cut down. When reduction in commercial and administrative charges was made, it cut down the recoveries uniformally for all the items involved. Explaining the position further the Management stated as follows :—

"We have not been able to absorb all the overheads in the prices that we are able to quote under the guidelines that we have. But more recently, we are trying to rectify the situation by quoting to our customers a more reasonable price compared to our cost of production."

"In the earlier stages when full information regarding the various elements of costs like complaints, packing etc. were not available individually, it was a general practice to make all *ad-hoc* recoveries towards commercial and administration charges, which included some of these elements. Packing, in any case, unless it was of a special nature, was charged to the factory expenses and was adequately covered by that head. As long as the competent authority authorising reduction knew about the total level of recoveries under the heading of commercial and administration charges, he was fully aware of the reduction being made and authorised. Recently, we have been preparing 2 estimates one showing the full recoveries of C&A charges and the other proposed recovery to meet the market condition. The variation, as a rule, goes only in the C&A charges and is readily available on the estimate sheet for comparison. However, it must be stated that even in the earlier method of reducing C&A charges, the extent of reduction was always available to the officer authorising the reduction. Only he had to make a small calculation himself to arrive at the amount. The difference is entirely procedural and has no other significance.

An agreed format was prepared in July, 1969 in consultation with the Government Audit for preparation of the estimate. This estimate sheet besides having appropriate columns for the various ingredients has also a column where definite reasons for reducing the sale price by making reduced recovery of profit and C&A charges are indicated.

While we were having Factory Expenses (FE) rates (based on optimum level of the production) right from the beginning, no detailed study was undertaken for fixation of commercial and administrative charges as a good deal of administrative charges were allocated to 'Incidental Expenditure during Construction' in the earlier years. Based on the practice prevailing in the Consultants' Factory, an *ad-hoc* rate of 17½% was levied in totality as commercial and administrative charges on the Estimated Factory Cost. In course of time, production and selling functions increased rapidly. While the *ad-hoc* levy of 17½% as C&A charges was continued in respect of generating plant, the recoveries in respect of other products were increased depending on what the market could bear for individual products. A detailed study was, however, undertaken in 1967-68 and it was found that Commercial & Administrative Charges were around 30%. The recovery rates of C&A Charges were, therefore, formally fixed at 30% of Estimated Factory Cost (E.F.C.) from the year 1967-68. In subsequent years also, when C&A charges were around the same percentage the rate was continued at 30% upto 1969-70. During this period, again, the recovery of C&A charges had been limited to 17½% for generating plant to keep the prices at reasonable level. If in any individual case, price for comparable equipment allowed a larger margin, recovery was made at 30% of E.F.C.* The rate of C&A recovery was again raised to 35% with effect from August, 1970 when a detailed review of the actuals of year 1960-70 was made. A review of the same was again made after the close of financial year 1970-71 and it was decided to continue the existing rate of 35% which is till current."

6.16. The Committee pointed out that in October, 1961 the Board of Directors passed the following resolution :—

"Resolved that for conducting the day-to-day affairs of the Company the Chairman may exercise the powers vested in the Board of Directors in accordance with their policy."

6.17. In June, 1968, the Ministry agreed with Audit that it was necessary to report such decisions taken by the Chairman to the Board of Directors to enable it to satisfy that these were in accordance with the policy. This was, however, for the Board to decide and the Company was being requested to place it before the Board.

6.18. In a written reply furnished after the evidence the Management stated that the communication of the Ministry, in question, was placed before the Board in their meeting held on 6-6-1969.

The Committee was further informed that the Board considered it desirable to codify the delegation of powers by the Board of Directors in favour of the Chairman and Managing Director and suggested that a proposal for delegation of powers to the Chairman and Managing Director containing a list of items may be put up to the Board for approval. This was done and the Board of Directors in their meeting held on 11-1-1971 finally approved the delegation of powers to the Chairman as recommended by its Sub-Committee.

*According to Audit, files indicating that the C&A charges were reviewed during 1969-70/1970-71 and it was deicided to recover these charges @ 35 per cent of the Factory Cost have not been shown to the Chief Auditor, Commercial Accounts, Bhopal for verification of the reply of HE (I) L.

6.19. In regard to the price ceiling imparted equipment the Management explained their existing Pricing Policy and stated that the products manufactured by their factory were divided into two distinct categories :—

(a) Products in the competitive market.

(b) Products in monopoly or semi-monopoly range.

It was further mentioned that though the method of estimating the cost was similar in both the cases, with slight variation of certain ingredients due to shop conditions, fixation of selling price was dependent to a large measure on the extent to which these prices were acceptable to the customers. In the competitive range fixation of selling price was guided by market conditions. This generally gave the direct factory cost (Material, labour and factory overheads) and a margin of recovery towards administration, commercial and other charges including Royalty where applicable. Depending on the market for each product, certain percentage profit was also covered wherever possible.

6.20. Even in the so called monopoly range they were unable to fix the prices to give reasonable margin of profit as the customer insisted that prices be fixed reasonably and compared them with the lowest offers made by foreign manufacturers for similar or comparable equipments. Price comparisons were made with distress offers of foreign manufacturers supported invariably by export subsidies. Besides this incorrect equation of home and export prices, customer was not prepared to concede that comparison should be made with products having similar design philosophy and manufacturing techniques. These issues were discussed with the Planning Commission and it was more or less agreed that prices fixed by negotiation with the customer should be equitable and should not be more than the landed cost of comparable imported equipment following more or less similar design philosophy.

6.21. Regarding the policy of relating the price to landed cost of imported equipment, the Management stated that because of the following three prime factors this was not a very rational policy.

(i) From August, 1960 onwards till February, 1969 only fully finished components not requiring any further work, when imported, used to be charged customs duties at the concessional rates as applicable to completed equipment *i.e.* all other imports of raw material and semi-finished components used to attract higher rates of customs duty. However, from February, 1969 onwards some more items out of this category were covered under concessional rates of customs duty.

(ii) Quotations for imported equipment are normally supported by heavy exports subsidies and other export incentives.

(iii) The prices of imported components and semi-manufactured products are much higher.

6.22. Explaining the general basis for assessing the cost and arriving at the selling price the Management stated that the estimated cost took into consideration the cost of :

(1) Direct Material;

(2) Direct Labour;

(3) Factory overheads (Indirect Material, Indirect Labour, Employees benefits, Depreciation, Works Management cost, Works Services, Repairs & Maintenance expenditure, Insurance of the Plant, certain normal tooling);

(4) Engineering & Drawing Office expenses;

(5) Standard Development charges;

(6) Development Reserve;

(7) Handling charges for purchases Resold;

(8) Charges for special Tests if any;

(9) Complaints Reserve;

(10) Packing charges.

The selling price was evaluated by adding the following to the above :—

(1) Commercial and Administrative charges (C&A), (Administration charges, Commercial charges, Township expenses, Consultants charges, Deferred training expenses, interest on loan capital).

(2) Profit as a percentage on the total of the above. The margin of profit, both in the competitive and the monopoly ranges, varies in different cases. In the competetive range, the margin is guided by the market level of prices, and in favourable conditions as are existing at present, recoveries of profit upto 20% have been made without any difficulty. Earlier during the recession, we had to forego even the normal recoveries to be able to sell our products in a highly competetive market. In the monopoly range, the normal percentage of profit is about 10% on the estimated costs. For the generating plant and traction equipment, where policy pricing is invariably adopted, margin of profit normally included in our estimates, is about 10%. However, it has been the experience that whenever the prices are fixed by the Government pegging them to prices for imported equipment, even this margin is not available.

6.23. The Committee pointed out that the Committee on Public Undertakings (1967-68) had recommended in their Twelfth Report (Fourth Lok Sabha) that the Undertaking should work out such costs of production in respect of each of its products as would help evolving a rational pricing policy and asked whether HEIL had brought about any change in the pricing policy since that recommendation of the Committee on Public Undertakings.

6.24. The Company stated in a written reply that no change in the pricing policy as such had been brought about. It had not been found necessary, they said, to change the policy since their system was already such as would result in rational prices; materials were based on the engineering specifications; labour hours on the process and rate specification and factory overheads based on attainable level of production. However, certain imperfections especially as regards control and delegation in working out the system were spotted and improved upon.

6.25. The Management mentioned the following three major elements in working out the cost of production :—

"*Material*

The quantities specified by the engineering specification and for the purpose of pricing the latest market prices are being taken. Wherever necessary, a suitable escalation clause to cater for the increase in price of material is included.

Labour

The labour hours and the grade of labour are based on the data supplied by the Process and Rate Division. In the big contracts, where it would take long time to complete the job, suitable escalation clause for increase in labour rates is incorporated.

One aspect where optimum working condition will have meaning is, in regard to efficiency of labour. We are assuming the average efficiency which is likely to be attained during the period when the job will be done.

Factory Overheads

*These are calculated on a level of production which is likely to be attained during the pendency of the contract. By and large, this would correspond to optimum working level in the established product divisions; and may not be so in the newer products especially in the Power Plant Divisions."

6.26. In regard to the steps taken to effect economy with a view to reduce losses, the Management of the Company attempts were continuously made to increase the output by motivating the persons through incentives, arranging for the uninterrupted flow of materials and components by suitable 'Make or Buy' decisions, etc. The areas of leakage were being very rigidly reported to the top management and different level supervisors were being made fully aware of them so that these could be reduced. These relate to idle time, overtime, inventory, holding, etc. The expenses on social overheads like maintenance of residential buildings, roads, hospital and educational facilities etc., had been considerably curtailed. It was also stated that the effects of these steps would be felt in due course.

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*According to Audit. It is not clear how it is stated that the attainable production assumed for calculating the factory overheads generally correspond to the optimum level in the established products divisions when it has been stated earlier by HE (I) L that it is difficult to spell out the installed capacity of the different machines.

6.27. The Committee find that Heavy Electricals (India) Ltd. are manufacturing products in two distinct categories viz. "competitive range", 'semi-monopoly' or 'monopoly range'. As far as "monopolistic" and "semi-monopolistic" equipments are concerned, the instructions issued by the Bureau of Public Enterprises stipulate that ordinarily the "landed-cost" of comparative imported equipment should be regarded as the absolute ceiling but where there are reasons to believe that the F.O.B./C.I.F. prices for imported equipment are artificially low or in other exceptional circumstances where cost of production of indigenous manufacture is very,high, prices may be fixed higher than the landed cost with the approval of the Ministry of Finance. As regards "competitive" items, Heavy Electricals (India) Ltd. have recently introduced a system under which normal estimate is made for all the elements of cost, and the price is reduced to the market level specifying reasons for such a measure. Heavy Electricals (India) Ltd. have expressed the view that 'barring certain standard products bulk of manufacture in the monopoly region does not lend itself to comparison with the landed cost. The Committee recommend that HE(I)L should evolve their pricing policy in such a way that prices fixed by negotiations with the customer are equitable and as far as possible are not more than the landed cost of comparable imported equipment following more or less similar design philosophy. While the Committee agree that prices of products in the competitive range have to be regulated by the principal of "what the market can bear." The Committee recommend that some guidelines should be issued to the Commercial Department to ensure that the selling prices of products in the competitive range are not unduly below the cost of production. In fixing the selling prices, the Committee would urge Government that utmost care should be taken to ensure that overheads are, as far as possible, absorbed in the prices. The Committee would stress the need for improving efficiency, increasing output and effecting economy so that the prices charged by Heavy Electricals for various products compare favourably with the internal price obtaining in exporting countries in respect of the particular product.

B. Non-enforcement of the Price Variation Clause

6.28. Sale contracts entered into by the Company during the period December, 1963 to August, 1966 contained a 'Price Variation Clause' permitting an adjustment in the sale price of the product based on the difference in material cost between the date of tender and a date representing three-fifth of the contractual delivery period. Although, there is a general trend of rising prices of raw materials, the Management did not take any action to assess the claims recoverable on this account.

6.29. The Company assessed in December, 1969 that it would be entitled to recover Rs. 40.06 lakhs by making the formula applicable to significant material like Copper and Core Steel for sale orders of transformers only.

6.30. During evidence the Committee enquired whether the Company was taking advantage of the 'Price Variation Clause' according to which they were entitled to recover sums amounting to several lakhs. The Chairman of Heavy Electricals (India) Ltd. stated that in the case of traction motor which they had to supply to the Railways, they were taking recourse to the price variation clause. Enquired whether this advantage was being taken in each case, the Managing Director of the Company stated as below :—

"We are making claims in each case. But the difficulty has been in establishing our claims. We have run into difficulties in various ways. The price variation clause which we started in August, 1966 was on this basis that the tenders will be based on the cost of material ruling on the date of tender and at three-fifths period of the delivery, we will find out the cost of the material. As every body knows, this is one of the Standard forms of price variation clause given all over the world. They say that the three-fifths period is the time you are supposed to have all the material. In effect, we may not buy it at that time. The difficulty came in when we tried to establish the cost of material at three-fifths period which may vary from order to order. The Factory is a continuously operating factory and there is no fixed cost price index data in this country.

We ran into the difficulties. Suppose I say, purchase order No. so and so placed in September, 1967, and this is the cost. Nobody is willing to say that this is the material which went into this order nor there is any way of proof that a particular steel or a particular copper went into the order.

This is the difficulty and most of the claims which we have been making are being disputed.

Later on, we revised this price variation clause. Then, we said that we would go on the indices published by the Board of Trade in U.K. This is the BEAMA price variation clause. We introduced that and we are having good amount of success in that. This has been accepted by the Customer. The cost indices are published and we are able to say what is the cost."

6.31. It was observed that the contracts which included the price variation clause were for the period from December, 1963 to August, 1966 and the position regarding the contracts entered into by the Company after August, 1966 was enquired. The Managing Director explained that in respect of contracts after August, 1966, they had gone by the price variation clause on the basis of the Board of Trade indices and that they had better chance of making recoveries.

6.32. The Committee enquired whether the amount of Rs. 40 lakhs which they had assessed as the amount due to the price variation clause had been recovered. The Financial Adviser of the Company replied that upto 31st March, 1971 the total claims amounted to Rs. 42,99,335.61 paise out of which they had already recovered and received an amount of Rs. 6,10,448.05 p. The Managing Director also informed the Committee that the latter price variation clause was proving to be more practicable and that after 1966 they had assessed about Rs. 3.92 lakhs out of which they had already recovered Rs. 1.58 lakhs as on 31.3.1971.

6.33. The Committee regret to note that though the Sales Contracts entered into by the Company during the period from December, 1963 to August, 1966 included a Price Variation Clause the Management did not take any action to enforce this clause and to assess the claims recoverable on this account till December, 1969. The Committee observe that the very purpose of having such a clause in the sales contracts is defeated if it is not enforced properly and

timely action is not initiated to lodge claims for recovery of the amounts. It transpired during evidence that in respect of contracts after August, 1966, the Company introduced a revised 'price variation clause' which is operated on the basis of indices published by the Board of Trade in U.K. The Committee recommend that a periodical assessment should be made by the Management, claims preferred on the parties concerned and concerted action taken to ensure speedy realisation of the amounts recoverable. The Committee also recommend that responsibility should always be fixed for any failure to take timely action in this regard.

VII

EXPORT PROMOTION AND IMPORT SUBSTITUTION

A. Export Promotion

7.1. The Consultancy Agreement with M/s. A.E.I., U.K., restricted export promotion of the Heavy Electricals (India) Ltd. to Burma, Ceylone, Nepal and Pakistan till November, 1970 but towards the end of the period it was extended to Thailand, and Combodia for certain peroducts only. Till then all enquiries for restricted areas were to be cleared specifically by the Consultants and with the specific permission of Consultants, HEIL have been quoting to certain other countries like U.A.R. Iran, etc. also. The restriction on export jurisdiction ended with the expiry of the agreement in November, 1970.

7.2. The Management of the Company, while explaining the reasons for accepting restrictions imposed on exports by the Consultants, stated in a written reply furnished after the evidence that, it is reasonable to assume that any foreign manufacturer giving licence to another country to manufacture equipments would not want to create competitors for its equipment in other countries of the world, and jeopardise the sale of their own products in those areas or to fall foul with other licencees elsewhere. The acceptance of restrictions on export as perhaps dependent upon the offers available to the Government at the time.

7.3. The Management added that Heavy Electricals (India) Ltd. is a constituent member of India Consortium for Power Project (Pvt.) Ltd. and it has been and will be their endeavour to participate in Overseas tenders for turn-key projects involving equipment from several sources including that from other manufacturing companies.

7.4. The Committee desired to know in how many international fairs the products of HEIL had been exhibited and with what results. The Management stated in a written reply that they had so far participated in several Overseas trade fairs/exhibitions but not through India Consortium for Power Projects (P) Ltd. (Appendix-II). They had never participated in any trade fair/exhibition abroad exclusively by themselves but only as part of Government's efforts by way of Country's Stalls /Pavilion. Until November, 1970, their participation in such fairs was, therefore, necessarily limited to prestige building. Their participation in such trade fairs/exhibitions had resulted in creating 'Customer Interest' in their ability and capacity.

7.5. According to Management, HEIL could find good markets and there is a considerable scope for their finished products in developing countries, specially those near India like the Middle East and the Near East. There is also scope for sale of their intermediate products to these countries for contracts in third countries close to India. In spite of this unlimited scope, the HEIL has been quoting on selective basis *i.e.* after considering domestic order book, established nature of a product and operational experience they have on it within the country with a view to ultimately get up to sale of approximately 10% of their capacity abroad.

The table below gives values of Tenders participated in Orders received, Tenders active and Value of Orders likely to mature :

		(Rupees in Lakhs) Tenders		
	Order received	Participated	Active	Likely to mature into orders.
Iraq	14.75	55	12	6
UAR	2.50	140	30	20
Iran	Nil	370	370	100
Singapore & Malaysia	91	205	Nil	Nil
Sudan	Nil	30	Nil	Nil
Thailand	Nil	52	Nil	Nil
Ceylon	0.60	20	Nil	Nil
Syria	Nil	30	Nil	Nil
Indonesia	Nil	2	Nil	Nil

The above orders are confined to those countries only, where we have participated in Trade Fairs/Exhibitions. Countries not listed in the Table are the ones where we have not submitted any Tenders and, therefore, have received no orders.

7.6. Total value of Orders received upto 1.12.1971 amounts to approximately Rs. 1.28 crores and these, in addition to the countries shown in the above Table, also include equipment for Malawi, Uganda, Australia, Kuwait & Ghana, countries in which we have not participated in any Exhibitions/Trade Fairs.

7.7. The Ministry of Industrial Development stated in a written reply that the Consultancy agreement having expired in November, 1970, there are no restrictions thereafter on export of the products covered by the original agreement. The company is now submitting tenders against global inquiries from all these countries. They are also taking part in exhibitions/trade fairs in these countries. There are good prospects for securing business in the export market for standard products like transformers, switchgear, motors etc. The prospects for business in generating plants will brighten up as machines produced at HEIL start operating in our country and as operating experience is gained.

7.8 The Committee note that the Heavy Electricals (India) Ltd. had no discretion in the matter of export of their products due to the restrictions imposed by the Consultants in the Consultancy Agreement till November, 1970. As the embargo on export jurisdiction has since been removed, and as there is considerable scope for its products in developing countries, the Committee recommend that the Company should explore all possible means of expanding its export trade for their standard products in order to utilise full capacity of the Plant.

B. Import Substitution

7.9. There was no provision for developing indigenous substitution for imported raw materials and components of the various products in the Project Report which, however, *inter alia* ran as under:—

> "No doubt the Government will develop the production of many of such items in India in due course, but in the meantime it appears that it will be necessary to import supplies and every assistance will be given either putting the Government in touch with suitable Suppliers or purchasing on their behalf."

The Company started a separate Cell for Import Substitution w.e.f. 27th November, 1965.

7.10. The approximate percentages of import contents (C.I.F. Value) to the sale value for the years 1965-66, 1966-67, 1968-69, 1969-70 and 1970-71 are compared below:—

Products	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
Switchgear	12	11	16	15	14	15.5
Controlgear	19	27	24	29	20	16.25
Transformer	38	24	29	26	26	25.3
Capacitor	17	17	10	15	15	15
Traction Motors	23	33	33	23	20	23.98
Industrial Machines	44	27	22	20	23	20.14
Large Motors		27		25		20
Heavy Rotating Plant			39		23	
Water Turbine		18	17	10	10	10
Turbo Generators				27	27	26
Steam Turbines					50	43.80
Condenser and Heat Exchanegers				30	30	20
Rectifiers					35	15.5
Electronic Equipment (New Product)						5

NOTE:—The higher percentage during 1967-68 was due to the effect of devaluation.

Note :—The import content of Switchgear is higher due to imported relays and instruments for control panels made to customer's specification and also due to the manufacture of a large number of GA9 airblast circuit breakers which has a higher import content. The increase in percentage of import content in respect of traction machines for the year 1970-71 is due to the fact that 40 armaturers for traction generator (TG 5301, for BG DE Locos had to be imported to meet urgent delivery requirements of customers. Electronic equipment is a new product taken up by the Company during 1970-71.

7.11. The import content has gone up in case of controlgear due to manufacture of more number of custom-built cubicles, whereas the import content has shown a downward trend in the case of traction machines and water turbines due to upward revision of price and use of indigenous fabricated components respectively. The import content for capacitors has also gone up as major portion of output of capacitors was in the high voltage (H.V. type) range.

7.12. The Management intimated to Audit (December, 1969) the following reasons for not achieving a higher percentage of indigenous content:—

(i) The indigenous manufacturers like Heavy Engineering Corporation, Ranchi, Alloy Steel Plant, Durgapur and Hindustan Steel, Rourkela could not develop as per their programme.

(ii) The reluctance on the part of the customers for procducts like steam turbines accept to unproven indigenous materials, though available to the required specifications.

(iii) Achievement of cent per cent indigenous content is not a practical proposition, since of necessity, we have continue to import some of the raw materials and semi-finished components.

7.13. The targets for import substitution as fixed by the Company and the actual achievements during the last five years are shown below:—

	1966-67	1967-68	1968-69	1969-70	1970-71
			(Rupees in lakhs)		
Targets Annual fresh Substitution.	70.00	50.00	60.00	80.00	100.00
Actuals	44.12	38.12	5.08	41.48	29.32

The abnormal short-fall in the substitution during the year 1968-69 was due to the fact that till the year 1967-68 the Company had been working out the figures of import substitution for which they had established suppliers whose samples had been approved without correlating the same with the actual execution of orders whereas during 1968-69 the achievements have been worked out for the fully executed orders.

7.14. The Committee pointed out that a comparative study for import contents for four years from 1965-66 to 1969-70 indicated that the import contents had gone up in the cases of Controlgear and capacitors and enquired about the trend of import content of the products manufactured during 1969-70 and 1970-71. The Management stated in a written reply that the import content in the case of Controlgear and Capacitors had gone up because of the introduction of new products with sophisticated technology in this field of application which required special material and components. They further stated that this import content would gradually come down as the regular manufacture of the concerned equipment was fully established.

7.15. The Committee asked how the Management proposed to overcome the three difficulties/reservations of the customers intimated by the Management to Audit in December, 1969:—

(i) The indigenous manufacturers could not develop as envisaged in their programme.

(ii) The customers were reluctant to accept unproven indigenous materials.

(iii) Achievement of cent per cent indigenous content is not a practical proposition.

7.16. The Management stated in a written reply furnished after the evidence as follows:—

(i) "In a number of cases the import substitution efforts could not succeed or have been delayed as some of the indigenous manufacturers are lagging behind in their production programme. Even manufacturers like Heavy Engineering Corporation Ltd., Ranchi, Alloy Steel Plant, Durgapur, Hindustan Steel Ltd., Rourkela have not been able to supply our orders. As these are the only indigenous manufacturers capable of taking up the manufacture of large and special item like rotor forgings, large steel castings, alloy steel, electrical sheet steel etc., we have to depend on them for import substitution. Efforts are being made to expedite the manufacture of these through constant discussions and persuasions.

For example, the biggest prospetive suppliers of components is HEC who have declined to guarantee chemical composition, heat treatment and mechanical properties specified by us, all at a time and wanted to guarantee only two. As high temperature properties (assumed in the design) depend on all the three factors, this deviation could not be agreed without actually getting the material and testing them for creep which is a long duration test. HEL could not ensure the properties of these and so could not satisfy the customer about the material available indigenously.

To overcome this difficulty development order was placed on HEC and one casting has even been manufactured by them for our 120 MW set. We are going to conduct intensive test including creep on these and if they prove satisfactory we will then be able to satisfy the customers and use the indigenous alloy steel castings on regular basis.

For rotor forgings, vaccum degassing facility is required which is not available any where in India.

(ii) In case of alloy steel forgings and castings prospective indigenous suppliers have expressed their inability to supply material of required quality. The high temperature *i.e.* creep requirement calls for strict control of chemical compositions, heat treatment and manufacturing process which have got to be strictly adhered to. Any deviation in these requires detail long term creep tests before accepting the material for actual use on the machines. Further the manufacturers are not equipped with facilities like vaccum degassing for manufacture of these items. However, in these cases also we are constantly urging the manufacturer to establish the required facilities. We are closely associated with National Metallurgical Laboratory for establishment of the creep testing laboratory Jamshedpur.

(iii) It is not possible to Indianize completely all our products in the near future as this depends to a large extent on the general development of the country. Materials like cold rolled grain oriented sheet steel, synthetic rubbers, special insulating materials like electrical grade paper, silicone varnishes etc. would not be available indigenously for some time to come. Moreover, materials like copper, tin etc. are either not available in the country or not available in the requisite quantity."

7.17. The Committee asked how the present demands of the Company in respect of Aluminium and Copper are being met. The Management replied that excepting for very heavy sections, majority of their demand in respect of Aluminium was being procured from indigenous sources only. Regarding Copper, virgin Copper, they stated, that it was being imported as before and this was being converted by a number of fabricators. They further stated that they had been able to procure the desired sections to the extent of 60% to 70% of their requirements based on the capacity of indigenous fabricators. Special Copper conductors were still being imported. The Management have further informed the Committee that they are still far from being self sufficient in producing indigenous Copper and that they are very largely dependent on imports of Virgin Copper. They opined that one of the steps urgently needed to solve at least the Copper problem was to ensure speedy completion of some of the Copper projects taken up in the country, like Hindustan Copper.

7.18. The Committee find that there was no specific provision in the Project Report for activising self-reliance by developing indigenous substitution for imported raw materials and components. The Committee note that though a separate cell was set up for import substitution by the Company with effect from the 27th November, 1965, the performance of the Company during the last five years i.e. from 1966-67 to 1970-71 toward import substitution had been rather disappointing. In fact, there has been an appreciable increase in the percentage of import content in switchgear, traction motor and capacitors. While the Company has been fixing increasing targets for import substitution, percentage of achievement has actually shown downward trend.

The Committee were informed that the following difficulties stood in the way of achieving self-sufficiency:—

(i) The indigenous manufacturers could not develop as envisaged in their programme.

(ii) The customers were reluctant to accept unproven indigenous materials.

(iii) Achievement of cent per cent indigenous contents is not a practical proposition.

The Committee recommend that Government should take immediate steps to help the indigenous manufacturers so that they do not lag behind in their production programme. Urgent steps should also be taken to standardise and improve the quality of the products of Indian Manufacturers so that these are readily accepted by the customers. The Committee suggest that assistance of Research Institutions in the country should be taken in developing indigenous substitution for items of raw materials and components in order to achieve self-reliance.

The Committee also recommend that Government should chalk out a time-bound programme for achieving indigenous production of items which are being imported at present.

VIII

COST CONTROL

8.1. An analysis of the cost of the manufacturing orders closed as worked by the Cost Accounts Department revealed a majority of cases, the selling price covered the estimate cost. The actual factory cost was, however, higher than not only the estimated factory cost but also the selling price. The variations between the estimated and actual factory cost have not been investigated to locate the reasons for taking corrective action.

8.2. The Cost Accounts Department in its first quarterly report for the quarter ending June, 1969 placed before the Management Committee in its 33rd Meeting held on 19th November, 1969 observed on the completed orders as below:—

(1) "Switchgear and Controlgear—As style requisition were not received even after 6 months from the date of closing the M.O's their values had to be adjusted in the statement for the purpose of realistic figure. It is also found that un-used requisitions are utilised after the completion of the concerned orders, result in prior period charges. M.O's quoted on Directly chargeable SRVs are still found to be incorrect and in some cases, relate to the M.O's completed long before. Engineering Expenses are abnormally high, compared to the estimates. EFCV's for 2 or 3 were not available.

(2) Transformer—The increase in material cost seems to be due to increase in copper price on account of devaluation.

(3) Capacitor—EFCV is not available for such orders.

(4) Industrial Machines—Out of 22 orders closed, costs are found to be abnormal for all orders, hence they have been referred to the Superintendent for his investigations.

The data of the completed orders have already been given to the Products Divisions concerned but we do not know the results of their investigations. In this connection a draft procedure was submitted to the General Manager for bringing about uniformity in the matter of cost investigation and reporting since the Government audit have taken up this issue for their comments. It is very necessary that we have a regular system cost of investigation for every product and the reports of this investigation must be made available to Cost Department as also Management Committee for any further action."

8.3. The Management intimated Audit (December, 1969) that "It is not correct to state that the products have been sold below cost. The correct interpretation should be that due to various reasons the manufacturing cost has gone higher than the sale price. In the initial stages the time taken for establishing of technical skills is one of the main reasons for higher cost of production. Sophisticated equipment custom built to specific requirements does take time to establish and this has contributed in a large measure to higher labour charges attended with which the Factory expenses as calculated go up very considerably. In some cases there has been a small variation due to the material cost also over a period."

The Management also informed Audit that they have introduced (December, 1969) a systematic cost investigation for realistic estimation and control over costs under which variance exceeding 10 per cent of the estimates in labour or in material will be scrutinised and provide as a feed back information to product Engineering group for remedial measures on future estimates.

8.4. Clarifying the position regarding price of their goods being not competitive, the Chairman stated during evidence:—

> "The cost of production is certainly much more than the imported landed cost. The landed costs in these turbines and heavy electricals equipment is really not a firm figure. It depends upon the order book position of a manufacturer abroad. It makes all the difference if he gets two orders for two more turbines or whether he does not get those turbines. He would be prepared to undergo a very heavy reduction of price that he quoted. There is an element of subsidy. Therefore, we have to away from landed cost. I have been able to succeed by getting the Govt. to agree to the point to go into the cost structure and give reasonable and fair price. I do not want that a high price should be given."

8.5. During evidence the Committee asked how the cost of the product was determined. The Managing Director of the Company stated:

> "There is a regular estimate sheet. There is a detailed estimate sheet where the costs of material from the engineering designs are given by the engineers. The cost of labour is determined the Labour man-hours and the actual man-hours which the designers think that it will take. It is a regular process."

8.6. The Committee pointed out that the selling price, in majority of cases of completed manufactured orders covered the estimated factory cost and that the actual factory cost by the Cost Accounts Department, to be higher than both the estimated factory cost and the selling price. The Committee also pointed out that the variations between the estimated and actual factory costs had not been investigated and enquired as to when the Cost Accounts Department was established and what functions were entrusted to it and what functions actually performed. The management of Heavy Electricals (India) Ltd. stated in a written reply that the actual factory costs for established products like Switchgear, Transformer, Capacitor, Tractor, Motors and Industrial Machines had been less than the sales value in the aggregate for the last several years, though there might be variations in the individual orders. They stated that this was borne by the fact that work in progress had been at cost for all these products and duration had been resorted to only for Steam Turbine, Water Turbine and Heavy Rotating Plant. The Company Auditors who went into considerable detail on this issue while auditing the accounts for the year ended 31st March, 1970, prepared a statement for all the established products comparing estimated cost and actual cost with the sales value. It was found that in all cases the sales value was substantially higher than the actual cost. They also stated that even the variations between the actuals and, estimated costs had been favourable by and large. The only exception, they said, was in the case of Traction Motors in the year, 1967-68 when the prices were fixed on *ad-hoc* basis pending a settlement.

8.7. The Management also stated that the Cost Accounting Division had been in existence right from the day the factory commenced production somewhere in 1960. The earlier set up covered the following functions:—

(i) Cost Compilation

(ii) Time and Wages

(iii) Material Accounting

(iv) Data processing

The earlier set up had to be reorganised on a decentralised basis to match with the Divisional activities. Some further functions *viz.* Sales, Assets and Insurance were added to make the set up more cohesive and homogeneous. The Cost Division has the following functional responsibilities:—

(i) To analyse and classify with reference to the cost of products and operations the same expenditure which, in the financial accounts has been recorded and summarised under financial codes.

(ii) To arrive at the cost of production of each job, process, department or service.

(iii) To provide data for periodical profit and loss account and balance sheet at periodic intervals, *e.g.* monthly, quarterly, half yearly, as may be desired during the financial year not only for the whole factory, but also for individual products.

(iv) To provide actual figures of cost for comparison with estimates and to serve as a guide for future estimates or quotations and assist the Management in price fixing policy.

(v) To provide perpetual inventory of stores and raw materials for preparation of interim profit and loss accounts and balance sheet without stock-taking and checking on stores adjustmenst at periodical intervals.

(vi) To arrange for the valuation of finished stock and work-in-progress at periodical intervals, *e.g.* quarterly, half yearly and yearly not only for the whole factory but for individual products.

(vii) To arrange for the preparation and drawal of wages of all Industrial Employees including Production Incentive Bonus.

(viii) To raise invoices for all Sales and keep detailed records for Sales Accounting.

(ix) To keep detailed Assets Records for the purpose of accounting, depreciation and physical verification.

(x) To maintain Insurance policies for Assets and Sales and keep accounting for claims etc.

8.8. Regarding investigation in respect of the variations between actual factory cost and estimated cost, the Management stated that according to the procedure, the investigation is done not by the Cost Department but by the Manufacturing Division in consultation with the Engineering Division. They however, added that the variations in material cost between the actuals and the estimates had been generally of the order of*5 per cent. In regard to labour, the estimates in the earlier years were bound to be approximate. In the absence of any standard times established for their labour at Bhopal, the time taken by the individual artisans, particularly, in the early stage of growth, was widely varying. The Management also intimated that with the introduction of the incentive scheme in most of the Divisions, the labour cost between the actual and the estimates tended to be comparable. Element-wise comparison of actual factory cost and estimated cost for the year 1970-71 for all the orders closed is furnished product-wise as in the (Annexure).

8.9. The Committee noted that prior to 1969 no analysis of actual costs of the products was being conducted and enquired that in the absence of any analysis of actual costs how control was being exercised to ensure that the actual cost was not higher than it should have been. The Management stated that the actual costs of the products were worked out all these years right from the beginning and the investigation as a procedure came into vogue only from 1969. As regards the control of the actual cost, it was taken care of basically by the paper work which they had adopted from the Consultants' practice. The Engineering Division worked out material requirements for each job to the last detail and the detailed specifications were converted into requisitions by the production office and released to the shops. There, was thus a close control on the material consumption. As regards labour, the process and rate Department worked out operation details for each component, and those details were converted into job cards for use on the shop floor.

*According to Audit, records in support of the statement that the investigations on random basis indicated variations to the extent of 5 percent of the material cost were not made available to the Chief Auditor, Commercial Accounts, Bhopal for Verification on reply.

8.10. The Company informed the Committee in a written reply that during the last 5 years the actual cost had been less than the Sales Price in all the established products. In the earlier periods, when the products were getting stabilised manufacturing the costs in some of the products were more than the selling price in case of certain orders. This in some cases had been due to wrong booking of material, labour etc. They further stated that though detailed cost investigation might not have been in vogue, total actual cost of the job was available and could be compared with the estimated factory cost or selling price. It was further stated by the Management that following the practice in A.E.I., the actual factory cost value was furnished only to the product superintendents. It was only in the beginning of 1969 that the cost Department adopted the practice of putting up these reports to the Management Committee. The Board of Directors are furnished with the product-wise profit or loss at the end of every year and the detailed information on order-wise and sales value is furnished to the Management Committee. Regarding investigation of variations, the Management Committee had asked for detailed investigations in certain cases.

8.11. The Committee enquired as to when the system of Cost investigation was introduced and in how many cases such investigation had been conducted and with what results. The Committee also enquired why the variations between actual factory cost and estimated cost were not investigated. Management furnished a written reply in which they stated that the system of Cost Investigation was formally introduced with effect from 12th December, 1969 but complete data on closed orders had all along been furnished by the Cost Department to the Manufacturing Divisions for looking into order-wise variations between Estimated Factory Cost and Actual Factory Cost. It was also stated that generally the trend of Actual Factory Cost *vis-a-vis* Estimated Factory Cost had been totally favourable. To prove the point they furnished the following figures for the year 1970-71:—

		Actual Factory		
	Estimated Factory Cost	Cost	Variation	Sale Value
Industrial Motors	43.92	44.48	(0.56)	62.43
Traction Generators	52.63	51.74	0.89	63.43
Traction Motors	221.00	179.33	41.67	361.78
Transformers	574.83	501.48	73.35	722.77
Capacitors	31.83	23.53	8.30	45.88
Switchgear	180.02	183.91	(3.89)	240.37
Controlgear	86.34	79.84	6.50	124.01

8.12. The Management further stated that the unfavourable trend in the case of traction was only marginal and it happened because of the external factors beyond the control of Shop Executives. Variations, they stated, were generally attributable to the purchase rates being different at the time of actual purchase as against the rates adopted in the estimates. Similarly for labour costs, the wage rates at the time of actual operations differed from the estimated wage level.

8.13. The Committee asked if proper action was taken by all concerned on these investigations or reports and if so, whether there had been any improvement thereafter. The Committee also enquired if the results of such investigations were used in giving future quotations. In a written reply furnished after the evidence, the Management stated:—

"While it is very difficult to quantify the benefits arising out of cost investigation, it cannot be denied that constant feed back of the data to Shop Executives on the orders closed has created considerable awareness of costs leading to better operating results in the established products.

The following figures prove the trend:—

Product	Percentage of factory cost to gross output 1969-70	1970-71
Traction Industrial Motors .	82%	76%
Transformer	89%	84%
Capacitor . .	81%	55%
Switchgear & Controlgear . .	97%	82%

It will be observed that there has been marked improvement in the margin available at the manufacturing cost stage.

The data on actual factory cost of the orders is very much made use of for corrective action by Manufacturing and Engineering Divisions as also while submitting future tender quotations."

Regarding investigation of variation between the actual factory cost and estimated factory cost the Management stated as follows:—

"An investigation of variation between the actual factory cost and estimated factory cost was not done in a very systematic manner or as a matter of routine in the earlier period. However, it does not mean that there had been no investigation at all. It was done on a rendom basis. These investigations indicated that there had been no appreciable variation in the material (about 5%), but variation was only in labour and consequently the Factory Overhead that it had attracted. In the absence of an incentive system, the booking of labour correctly to the job was not done; further due to the conditions then prevalent both as regards the development of skill and the discipline, labour bookings were erratic. Detailed or systematic investigation was not actively pursued since the above facts of the variation were widely known.

With the growth and development of skills and also incentive covering wider areas, a more systematic cost investigation was introduced in December, 1969. Implementation of this is still not very perfect. Education and understanding with regard to the timely and proper use of the documents connected with the paper work system, Coordination and understanding between various departments have to be achieved to make this investigation yield good results. Efforts are being made in this direction."

They further stated in this respect that the cost investigation had undeniable created an increased awareness at various levels about controlling the actual cost so as not to exceed the estimated cost. Corrective action wherever necessary was being taken. The information or knowlege that had been made available wherever investigation was done was made use of in submitting future tender quotations.

8.14. The Committee drew attention of the Ministry of Industrial Development to the recommendation of the Committee on Public Undertakings (1967-68) in their Twelfth Report (Fourth Lok Sabha) that the Undertaking should work out norms of costs of production in respect of each of its products as would help evolving rational pricing policy and judging reasonableness of actual cost of production and enquired what progress had been made by Heavy Electricals (India) Ltd. in evolving such *norms. The Ministry of Industrial Development stated in a written reply that according to their information the Company had worked out norms of cost of production for its established products such as switchgears, transformers, traction motors, etc. This had been done taking into account the factory overheads as spread over the attainable optimum capacity of the works. The same principle had been applied to the cost of commercial and administrative overheads. On this basis the quotations for different products were worked out. For the custom built products also, while individual estimates were made on the above basis, for purpose of comparison actual costs were worked out on completion of orders and the variations between the estimated costs and actual costs were investigated.

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*NOTE:—According to Chief Auditor, Bhopal, no norms of cost of production for the established products mentioned here, have been fixed.

Completed orders cost for 1970-71

(*Rs.lakhs*)

Products		Labour	F.E.	Material	M/c	E/Exp.	Total	S.V.
Industrial Machine	EFC	0.71	7.70	25.19	7.23	3.09	43.92	..
	AFC	0.90	10.28	21.01	8.82	3.47	44.48	62.43
Traction Motors	EFC	5.59	58.69	154.21	..	2.51	221.00	..
	AFC	6.86	72.43	97.97	0.92	1.15	179.33	361.78
Traction Generator	EFC	1.47	15.75	33.94	..	1.47	52.63	..
	AFC	1.35	14.07	35.83	0.10	0.38	51.73	63.43
Transformer	EFC	13.60	96.65	454.33	..	10.25	574.83	..
	AFC	12.08	88.58	385.40		15.42	501.48	722.77
Capacitor	EFC	0.91	7.08	23.19	..	0.65	31.83	..
	AFC	0.63	5.36	17.18	..	0.36	23.53	45.88
Controlgear	EFC	2.67	17.15	55.02		11.50	86.34	..
	AFC	3.04	21.12	48.63		7.05	79.84	124.01
Switchgear	EFC	8.13	52.81	111.61	..	7.47	180.02	..
	AFC	9.18	61.98	99.91	..	12.84	183.91	240.39
TOTAL	EFC	33.08	255.83	857.49	7.23	36.94	1,190.57	..
	AFC	34.04	273.82	705.93	9.84	40.67	1,064.30	1,620.69

8.15. The Committee note that an analysis conducted by the Cost Accounts Department of Heavy Electricals (India) Ltd. regarding cost of the manufacturing orders, indicated that in majority of cases, the selling price covered the estimated factory cost. The actual factory cost was found to be higher than both the estimated factory cost and the selling price. The variations between the estimates and actual factory costs were not analysed to find out the precise reasons for taking the necessary remedial measures. The Committee also note that the Cost Accounts Department, in its quarterly report for the quarter ending June, 1969 had inter alia observed, "It is very necessary that we have a regular system of cost investigation for every product and the reports of the investigation must be made available both to the Cost Department and the Management Committee for any further action". The Committee find that, though the system of Cost Investigation was formally introduced in the Heavy Electriclals (India) Ltd. with effect from the 12th December, 1969, investigation of variation between the actual factory cost, and estimated factory cost is not being done in a systematic manner. Education and understanding with regard to the timely and Proper use of documents connected with the system, coordination and understanding between various departments still remains to be achieved.

8.16. The Committee note that in regard to the orders completed during the year 1970-71, against the value of material worth Rs. 857.49 lakhs provided, in the estimates the actual consumption of the materials was Rs. 705.93 lakhs. The Committee feel that while the cost of materials actually consumed may be higher than the value provided for in the estimates on account of rise in cost, the reasons for reverse trend need elucidation, particularly when it is claimed that there was no appreciable change in the physical quantity of the materials. The Committee also recommend that endeavours should be made to place the existing Cost Investigation System on a more systematic and scientific footing not only in respect of the established products of the Company but also each item of manufacture.

8.17. The Committee emphasise the need for developing a proper Management information system by which desired information and analysis in respect of Sale Price, Estimated Factory Cost Value and Actual Factory Cost Value for all orders become available for taking timely corrective action and adjusting suitably the trend for future quotations. Cost control being one of the essential tools of Management, the Committee urge that unless a scientific cost control system projected on the basis of accumulated experience of the past and latest trends is developed, Management may not be able to effectively check cost trends of products in the interest of efficient and economic management. The Committee cannot too strongly stress the need for concerted action to bring down the cost of manufacture so that the capital machinery and equipment which are mostly used for generation of power become available to other public undertakings statutory bodies at prices comparable to those obtaining in international market. The Committee also recommend that the analysis of cost should effectively be utilised, for comparison with the rates prevailing in the international market.

IX

MATERIAL MANAGEMENT AND INVENTORY CONTROL

A. Material Procurement

9.1. The Power for issuing the D.P.R. (Departmental Purchase Requisition) has been delegated to the following Officers under various categories :—

Name of the Official authorised to sign D.P.R.	Ordinary Purchases Rs.	Proprietary purchases Rs.	Emergency purchases Rs.
1. Superintendent or his equivalent . . .	Up to 1,00,000	Up to 10,000	Up to 5,000
2. Assistant Works Manager	Up to 5,00,000	Up to 50,000	Up to 10,000
3. Works Manager . . .	Above 5,00,000	Above 50,000	Above 10,000

9.2. According to the purchase procedure, purchases are to be made by open tenders except in the following cases :—

(i) In special circumstances which should be recorded.

(ii) Whenever the value of an item is less than Rs. 50,000 and it is not proprietary or special development item, limited tenders will be issued to known Suppliers.

(iii) For very small value orders *i.e.* value being less than Rs. 1,000 in each case, limited tenders will be issued to 3 Suppliers.

(iv) For items which are of proprietary value or which involve special design and engineering consideration single tender will be issued.

(v) For Purchase requisitions whose value is less than Rs. 200, no tender will be issued.

9.3. Procedure to consult the Finance where the difference between the accepted and lowest tender is more than 5 per cent. (subject to an overall limit to be prescribed) has not been laid down as envisaged in the Ministry of Finance. Bureau of Public Enterprises O.M. dated 31st January, 1969.

The instructions issued by the Ministry of Finance in their O.M. dated 31st January, 1969 stipulate that "Finance should invariably be consulted for finalising purchase orders where (a) ring prices are quoted by the tenders; (b) the lowest offer is higher than the last purchase price by 50% and (c) the difference between the accepted tender and the lowest technically acceptable tender is more than 50% subject to overall limit." Action has also not been taken for introducing a system of reporting cases to Board of Directors beyond certain financial limits as required in the Ministry of Finance, Bureau of Public Enterprises O.M. dated 27th October, 1969.

9.4. The Company Auditors in their special report on the annual accounts for 1968-69 observed on the purchase procedure as detailed below:—

(a) "The prescribed procedure for calling of open tenders is considered adequate except in the case of purchases made under special circumstances, where discretionary powers have been delegated to the buying officers to make purchases without calling for open tenders even where the purchase value exceeds Rs. 50,000. In our opinion all purchases falling within the above category should be reported to the Board of Directors for its consideration and approval in terms of clause 19 of para 72 of the Articles of Association of the Company."

(b) "For D.P. Rs., whose value is less than Rs. 200 no tender will be issued but purchase will be made against cash either from Bhopal, Bombay, Calcutta, etc., and wherever possible after checking prices with 2 or 3 firms and the same should be recorded in the file. It was noticed that there is nothing to show in about 50 per cent cases that prices were checked up with other firms as required before the purchase."

9.5. The Committee asked whether a procedure regarding consulting the Finance where the difference between the accepted and the lowest tenders for procurement of material is more than 5 per cent had been laid down as envisaged in the Ministry of Finance (Bureau of Public Enterprises) Office Memorandum No. 9(28)/FI/67 Cir. Adv (P)-36 dated the 31st January, 1969 in which it is *inter alia* stated that the Finance be invariably consulted for finalising purchase orders where :—

(a) Ring prices are quoted by the tenders.

(b) The lowest offer is higher than the last purchases prices by 5%, and

(c) The difference between the accepted tender and the lowest technically acceptable tender is more than 5% subject to an over-all limit.

9.6. The Committee also enquired whether a system of reporting to the Board of Directors cases regarding procurement of material beyond certain financial limits, to be prescribed by the Board of Directors, was introduced as required in the Ministry of Finance (Bureau of Public Enterprises) Office Memorandum No. 1450-Adv (C)/Cir-56/69, dated the 27th October, 1969.

The Management stated in a written reply that the Office Memorandum dated 31-1-1969 was received by HE(I)L after a gap of seven months i.e. on 20-8-69. It was not placed before the Board as no such action was contemplated in the Ministry of Finance (B.P.E.) O.M. No. 1450-Adv (CIC)R

56/69, dated 27-10-1969, which was received by HEIL on 19-11-1969. Clarification regarding applicability of the O.M. was sought from the Ministry of Industrial Development and Internal Trade *vide* letter No. TST 16 (12) dated 17-3-1970. Clarification was received in their letter No. PRC 16(19) dated, 7-9-1970, stating that the instructions contained in O.M. dated 27-10-1969 were applicable primarily to works contracts. The Ministry also indicated that the question whether these may also be observed in the cases of purchases of stores was left to the Public Undertaking concerned to decide as deemed necessary.

9.7. The Ministry of Finance O.M. dated 27-10-69 was also put up to Board of Directors in the 122nd meeting held on 3-5-1971. The Board decided as follows :—

"The Board approved that only those contracts accepted without calling for tenderse in mergent cases should be reported to the Board where the amount involved was Rs. 25,000/- and more in each case. In regard to cases where open tenders are invited and more than one valid tender is received and lowest tender is not accepted due to technical or other reasons, it was decided that the cases costing beyond Rs. 10 lakhs each, instead of Rs. 1 lakh should be reported to the Board.

2. The Board of Directors desired that in all cases of purchases of stores, etc., reasons should be recorded for not accepting the lowest tender due to technical or other reasons."

The Management stated that the decision of the Board being implemented.

9.8. As regards purchases of stores, they stated that the powers had been delegated to Manager Purchase and his sub-officers for purchases against lowest open tender or limited tenders upto Rs. 2 lakhs. However, in case of orders other than lowest, purchase Department was empowered to make purchases upto an amount of Rs. 1 lakh.

9.9. In case of single such as proprietory items an emergency purchases, Manager Purchase and his subordinate officers had been authorised for making purchases upto Rs. 1 lakh and Rs. 50,000/- respectively.

All other purchase cases were referred to Junior Purchase Committee and Senior Purchase Committee in which finance respresentative was one of the members.

All purchases beyond Rs. 10 lakhs were being approved by the GM/ Managing Director, and were reported to the Board of Directors through Quarterly Financial Reviews.

The Management further stated in this connection as follows :—

"It will be observed that the procedures in the Company are appropriate to the needs of a Commercial Undertaking of our magnitude and adequately meet the principles of accountability. It is pointed out that major value of purchases made by the Company in a year are being dealt by the Purchase Committees in which Finance is duly represented."

9.10 The Committee in this connection asked the Ministry of Industrial Development whether they considered it necessary that a system should be evolved under which general instructions issued to the Public Sector Undertakings by Government be brought to the notice of the Board of Directors without delay even if their immediate implementation was not considered feasible by the Management for certain valid reasons. Explaining the procedure followed by HE(I) L the Ministry stated in a written reply as follows :-

> "In the case of a single tender such as for a proprietary item or for emergency purchases, Manager Purchases and his subordinate officers are empowered to make purchases upto Rs. 1 lakh and Rs. 50,000 respectively. For purchases above Rs. 1 lakh and below Rs. 2 lakhs there is a Junior Purchases Committee and for purchases above Rs. 2 lakhs and upto Rs. 10 lakhs there is the Senior Purchase Committee. On both these Committees a Finance representative sits as one of its members and hence such purchases take place only in full consultation of Finance. Purchases beyond Rs. 10 lakhs have to be approved by the GM/Managing Director and are reported to the Board of Directors. As regards the other requirement of the Ministry of Finance (BPE. O.M. 145-Q/Adv/CIR-56-69, dated 27-10-1969) regarding the need for recording reasons for not accepting the lowest technically acceptable tender and bringing it to the notice of the higher authorities, it has been confirmed by HEIL that purchase procedures laid down for the two Purchase Committees and for the delegated powers of the Manager (Purchase) and his subordinates do provide for such recording of reasons, and where the lowest acceptable tender is passed over such a purchase is also put up for approval by the next higher authority.
>
> It may be stated that about 75 per cent of the total purchases made by the Company in a year are handled by the Purchase Committees in which Finance is duly represented. It is considered that the procedures followed by the Company are appropriate to the needs of a commercial undertaking of such a magnitude as the HEIL and adequately meet the principles of accountability."

9.11 The Committee are unhappy to find that specific instructions issued by the Bureau of Public Enterprises about regulating the purchase orders in 1969 did not receive prompt attention. The Committee are also surprised that the instructions issued by the Bureau of Public Enterprises as early as January, 1969 were received by Heavy Electricals only in August, 1969 i.e. after a gap of about 7 months and another year was spent by HEIL in obtaining clarifications and seven to eight months more were taken in placing the matter before the Board of Directors for obtaining a decision. The Committee desire that the Public Undertakings should act with greater promptness and earnestness in bringing the general directives issued by the Bureau of Public Enterprises and/or the Administrative Ministry concerned, to the notice of the Board of Directors and implementing thereof. In fact, the Bureau of Public Enterprises, the Administrative Ministry concerned should have a procedure for following up the action taken by the Undertakings on their directives to see that no avoidable delay takes place in implementation of the orders. The Committee note that 75% of the total purchase being made by the Corporation are handled by Purchase Committees in which a representative of the Finance is present. The

Committee desire that a systematic analysis should be made of the remaining 25% purchases also to see which cases could be brought further within the purview of the Purchase Committee. The Committee recommend that the procedure governing these purchases should be such as to ensure competitiveness in rates of suppliers and recording concurrently the reasons where a lower offer is not accepted or where the difference between the purchase price proposed to be paid and the previous price paid for it is more than the prescribed percentage.

B. Inventory

9.12. (i) Procurement of materials and stores are made in advance on the basis of the future production programme. Inventory levels expressed as a percentage of next years production are indicated below :—

(*Rupees in lakhs*)

As on 31st March	Closing balance of inventory, raw material and components, store and spares and work-in-progress	Production during the next year		Column 2 as percentage of Column 4
		Year	Amount	
1	2	3	4	5
1966	1,271	1966-67	1,742	73
1967	2,048	1967-68	2,301	89
1968	3,085	1968-69	3,400	91
1969	3,821	1969-70	2,550	106
1970	4,050	1970-71	2,890	140

(ii) The following table indicates the comparative position of the inventory and its distribution at the close of last three years :—

(*Rupees in lakhs*)

	1966-67	1967-68	1968-69
Raw materials	920.90	1,280.35	1,421.52
Stores and spare parts (production and miscellaneous)	261.41	266.37	233.00
Work in Progress	865.24	1,551.85	2,166.56
Finished goods	413.94	535.50	870.49
Other stores (excluding scrap and materials-in-transit)	24.19	14.59	10.79
	2,485.68	3,634.66	4,702.36

9.13. The stock of stores and spares, raw materials and other stores was equivalent to 10.72 month's consumption (including actual consumption of raw materials and components directly charged to jobs) for production requirements in 1968-69 as compared with 12.86 months' in 1967-68 (after excluding loose tools written-off).

9.14 The works-in-progress at the end of 1968-69 represented 6.5 months' value of productin at cost (including depreciation) as against 6.4 months' in 1967-68 and 4.3 months' in 1966-67.

9.15 The following table indicates the total amount of works-in-progress value of raw-materials and components charged directly to the jobs and value of raw-materials and components not processed or consumed at the end of last three years :—

(Rupees in lakhs)

Year	Value of works-in-progress as on 31st March	Value of raw materials and components charged directly to jobs	Value of raw materials and components not processed or consumed at the end of the year	Percentage of value of raw materials and components not processed or consumed at the end of year but charged directly to jobs and included in W.I.P.
1966-67	865.24	89.43	91.22	10.54
1967-68	1,537.85	700.49	143.96	9.36
1968-69	2,166.56	910.31	641.94	29.63

9.16. If the value of raw-materials and components not processed or consumed at the end of the year is excluded from the works-in-progress, the stock of stores, spares, raw-materials, components and other stores represent 14.88 months' consumption for production requirements in 1968-69 as compared to 14.05 months' in 1967-68.

Finished goods represented 4.3 months' Sales in 1968-69 as compared with 4.3 months' in 1967-68 and 4.4 months' in 1966-67.

9.17 The main reasons attributed by the Management to heavy inventories are as detailed below :—

(i) Lack of co-ordination before placing orders resulting in the repeat indents for the same material by the different indentors.

(ii) Till 1965-66, the minimum and maximum ordering levels were not fixed with the result that the stores were purchased without correlating the actual requirement which resulted in huge accumulation of stock.

(iii) Ordering the material much before the actual finalisation of the sale orders.

9.18 The Committee enquired how the Government propose to reconcile the statement that there was delay for want of raw material and at the same time they had surplus stores and heavy inventory. The Secretary replied as follows :—

> "As a matter of principle, Sir, I would say 'yes'. Because the inventory must include all items which are to be needed and the inventory must be so managed that you have got in your stores whatever thing you need and we should not be forced to stop production because of lack of spare parts, raw-material or something like that. I entirely agree that in principle, it is correct. But sometimes certain crucial items are required for which some manufacturer has said some time back that he could not supply the spare for one year and we shall have to be delay the production for one year. So, in such a case the production gets upset on account of certain crucial items, not coming in time. But I agree that in principle the inventory must be managed in such a way that it provides all the raw material needed to keep the production system well."

9.19 The Committee asked why they could not use the computer for the purpose. The Secretary stated that the question had not been gone into but could be examined.

9.20 The Committee enquired how it was ensured which material and components were not in stores and in the work in progress. The Secretary explained that only those items which remained in the stores and did not remain in the work in progress go to workshop, were included in the inventory.

9.21 The Committee referred to value of raw-material and components indicated on page 73 of the Annual Report of the Company for 1968-69 and asked how the value of raw-material and components not processed at all could be included in the cost of work in progress. The Assistant Financial Adviser explained that "if a particular component is important and bought up for a particular machinery and it cannot be used at initial stages except on that product, then it is issued to the work shop because a shop knows where it is to be used and thus shown in work in progress."

9.22 It was pointed out in this connection that this short of accounting gave a misleading picture, both in regard to the value of work in progress and of the position of the raw-materials. Therefore, such a misleading accounting should be avoided. The Assistant Financial Adviser, however, reiterated that the procedure did not give a misleading picture and that was the basis on which profit had to be worked out. He further explained that while, in one year, he could take advantage of showing such materials worth Rs. 9 crores, in the subsequent year, he had lost advantage when it was reduced to 4 crores.

9.23 The Committee pointed out that according to Audit Report there was no co-ordination between different indentors of the Company resulting in repeat indents for the same materials. The stores were purchased without corelating the actual requirement till 1965-66. The materials were ordered much before actual finalisation of the sale orders. Since all these resulted in huge accumulation of stock, the Committee enquired whether proper procedure had now been introduced to avoid accumulation of the heavy inventory. The Management of the Company stated in a written reply furnished after the evidence as follows :—

> "Since 1965-66, a centralised stock Control Section has been responsible for indenting common raw materials required by various Divisions for the Factory. Proper procedures have now been laid down *vide* Circular No. 68 dated 6-5-67 both for Central Stores as well as for the Divisional Stores so that accumulation of heavy inventory is avoided.

The reasons for increase in inventory till 1968-69 were :—

(i) Setting up of the Steam Turbine Shop and buying raw-materials and components for Steam Turbines.

(ii) the rise in production in the factory requiring a build up of work in progress and stock.

While, it is true that stocks were increasing till 1968-69, they have come down considerably since then, as shown below :—

(Rs. in lakhs)

	Inventory Year wise		
	R.M. & Comp	Stores & Spares	Total
31-3-1969	1,421.52	233.00	1,654.52
31-3-1970	1,115.77	237.54	1,353.31
31-3-1971	1,022.38	215.98	1,238.36

9.24 The Committee regret to note that there were heavy inventory in the Company. The closing balance of inventory, raw material and components, stores and spares and work in progress was Rs. 38.21 crores at the end of the year 1968-69 which was equivalent to 106 per cent of the total production during the year 1969-70. The Committee find that one of the reasons for heavy inventory was that there was not effective coordination between different indentors of the Company resulting in repeated indents for the same materials. The Stores were purchased without coordinating the actual requirements till 1965-66 which resulted in huge accumulation of stocks. The Committee are perplexed at the paradoxical position that while on the one hand the Company had heavy inventory and surplus store on the other hand there was delay in the manufacture for want of raw materials. The representative of the Ministry of Industrial Development conceded during evidence that 'the inventory must be so managed that you have got in stores whatever thing you need and we should not be forced to stop production because of lack or spare parts or raw material.

9.25 The Committee recommend that the existing inventory system should be improved and the inventory so controlled as to provide all the raw materials necessary for maintaining a smooth flow of production without at the same time creating an undue accumulation of materials and spare parts. The Committee suggest that the Company, should explore the possibility of using computers for this purpose. The Committee also recommend that serious efforts should be made to achieve coordination between receipt of purchases from outside and items produced in the workshops.

9.26 The Committee wish to draw attention of the Management to various recommendations contained in their 40th Report (3rd Lok Sabha) on 'Material Management'. The Committee have no doubt that implementation of those recommendations would go a long way to improve inventory control in the enterprise.

9.27 The Committee also find that maintenance of records in respect of inventory in the Company was defective as value of raw materials and components not processed or consumed at the end of the year but issued to workshops were shown as work in progress. The Committee feel that this procedure gives a misleading picture about the work in progress and raw materials. The Committee, therefore, desire that the present system of showing the raw materials etc. charged directly to works as work in progress should be revised and such raw materials etc. which have not been processed at all should be included in the value of the raw materials and components for purposes of accounts.

C. Non-moving Stores

9.28 The details of stores and spares which have not moved for 3 years or more are given hereunder :—

(*Rs. in lakhs*)

Raw materials	23.77
Components	13.58
Stores and spares	26.59
Construction stores	10.82
TOTAL . .	74.76

Surplus Stores

The value of the surplus stores at the close of the three years from 1967 to 1969 was as under :—

Type of Stores	As on 31-3-1967	As on 31-3-1968	As on 31-3-1969
			(*Rs. in lakhs*)
Production and training stores	28.31	60.91	54.78
Construction and erection stores . . .	25.04	7.93	6.58
TOTAL . .	53.35	68.84	61.36

9.29 During evidence of the representatives of the Ministry of Industrial Development, the Committee pointed out that the inventory of the Company had been very defective and that the value of non-moving stores at the end of 1969-70 and which did not move for more than 3 years amounted to Rs. 86.63 lakhs and this included stores and spares to the tune of Rs. 42.39 lakhs. The Committee enquired into the reasons therefor. The Secretary stated in this connection as follows :—

> "By and large the spare parts were obtained on the advice given to us by our consultants that we must keep such and such parts because they are crucial and so on. We had to be guided by them because at the time we stated, we had no experience of this at all. So, we had to be dependent on our Consultants, particularly about what parts to keep."

9.30 The Management intimated Audit in December, 1969 that "The surplus stores have come down as on 31.3.1969 when compared to the position as on 31.3.1968. With sales of the order of Rs. 24 crores in 1968-69, surplus stores of about Rs. 55 lakhs cannot be considered as very high."

9.31 The Committee while pointing out that the value of non-moving stores at the end of 1969-70 which had not moved for 3 years or more amounted to Rs. 86.63 lakhs out of which stores and spares were to the tune of Rs. 42.39 lakhs as against Rs. 26.59 lakhs mentioned in the Audit Para, enquired of reasons for procurement of these stores in excess of requirement. The Committee also pointed out that the value of surplus production and training stores and construction and erection stores as on 31.3.1970 increased as compared to the last 3 years i.e. from 1966-67 to 1968-69 and asked what action had been taken for the disposal of such stores. The Management stated in a written reply that the surplus and the non-moving stores may be viewed in the proper perspective. These surplus and non-moving stores arose out of inevitable imbalances and changes in the manufacturing programme in actual working. These items, they stated, were the accumulated effect of working of the Company for over 10 years, during which period about Rs. 80 crores worth of stock materiais (excluding those items which are directly charged to the jobs) have been bought. It was further mentioned that including what had been disposed off in the last one or two years the value of surplus and non-moving stores was hardly 1 ½% of the total value of stock purchased. According to the Management, in an Engineering Industry of magnitude which had to undergo a period of basic development, this small percentage was very reasonable.

They further stated that efforts were being made regularly to dispose off the surplus stores in various ways. The value of stores and components which have not moved for the last two years or above, as on 31st March, 1971 are given below :

1.	Raw material	Rs. 19.33 lakhs
2.	Components	Rs. 22.29 lakhs
3.	Stores and spares	Rs. 63.04 lakhs
4.	Construction stores	Rs 10.49 lakhs
	Total	Rs 1 15.20 lakhs

The management indicated the action taken as follows :—

"Raw materials consisting of various ferrous and non-ferrous sections will be converted or occasionally exchanged for shapes and sizes which we need for our immediate consumption.

As regards components, Rs. 16 lakhs worth of components will be used in the next two years. The balance of about Rs. 6 lakhs will have to be disposed off by direct selling or exchanged with some other components of equivalent value.

In the stores and spares category about Rs. 20 lakhs of spares will have to be maintained as insurance against break down. About Rs. 6 lakhs of spares will be consumed in the next two years, leaving a balance of about Rs. 37 lakhs which mostly comprise of tools and gauges. The disposal of these tools is being vigorously pursued.

Regarding the construction stores, as the construction work connected with the various expansion projects is in the last phase, review is being done to find out how many of these items are to be retained for maintenance and how much have to be disposed off.

Surplus accumulation over a period is a normal feature in any manufacturing industry, as such no further investigation has been considered necessary. In fact, in our case, this is phenomenally low when one considers that this is all the accumulation in 10 years during which period materials worth crores of rupees have been bought and used."

9.32 The Committee find that the value of non-moving stores at the end of 1970-71 which had not moved for two years or more amounted to Rs. 115.20 lakhs and value of surplus stores as on 31.3.69 was Rs. 61.36 lakhs.

The Committee note that the surplus and non-moving stores arose out of imbalance and changes in the manufacturing programme. The Committee also note that non-moving stores and surplus stores have been identified over a period of ten years and comparison made with the value of total purchases. The Committee recommend that the determination of surpluses and non-moving items should be continuous process for which Company should undertake periodical review and serious efforts should be made to dispose off such non-moving and surplus stores as the company no longer requires. The Committee also recommend that now that the period of initial development of the Company is almost over it should not be difficult for the management to evolve norms for procurement of materials and make assessment of their requirements for the next two or three years on realistic basis so as to avoid unnecessary accumulation of surplus and non-moving stores which not only lock up the scarce capital but also push ·· · th ɛ cost of production.

D. Irregularities in purchases/sales made

9.33 (a) A few cases noticed in Audit where purchases were made in excess of requirements or extra expenditure incurred on purchases are detailed below :—

S. No.	Item	Remarks
1	2	3
1.	Wired Glasses . .	In 1962-63, the Company imported 70,750 number of wired glasses from Poland against sterling payment (Rs. 8,69,494) to be used in construction of Factory Block Nos. VII, VIII, IX and X in anticipation of Government's approval of the Supplementary Project Report prepared by the Consultants in 1961. The Government, however, did not approve the Company's proposal for the construction of said Blocks. As a result of fire which broke out on 5th April, 1967, about 5,100 wired glasses (Balance quantity on 4th April, 1967 was 34,103 Nos. of wired glasses valued at Rs. 4.30 lakhs) were found damaged by the Enquiry Committee set up in April, 1967 to enquire into the causes of fire. Subsequently, physical verification conducted on 13th October, 1967 revealed a shortage of 16,916 Nos. of wired glasses (including 5,100 found damaged by Enquiry Committee) valued at Rs. 2,07,718. The Company suffered a loss of Rs. 1.22 lakhs (Rs. 2,07,718 minus Rs. 65,938 realised from Insurance Company and Rs. 19,540 from sale of cracked and broken glasses). The loss has not been written off so far (November, 1969). The Management intimated in December, 1969 that "It was not practicable to defer purchase action till the approval of Government was received. We were forced to keep the wired glasses in the open as there was acute shortage of covered accommodation. More than normal care has been taken in keeping the glasses in their original packing cases. The loss is being reported to the Board." Had the original offer dated 18th August, 1964 in respect of order dated the 10th December, 1964 been accepted within the validity period, the Company would have saved Rs. 52,460 (£2,914-8sh.). In reply, it was stated by the Management in May, 1969 that the time allowed (60 days) in the original offer was not sufficient for taking a decision.

9.34 The Committee enquired the reasons for the import of wired glasses of the value of Rs. 8,69,494 against sterling payment without obtaining Government's approval for the factory blocks in the construction of which these glasses were proposed to be used. The Management of the

Company explained in a written reply that the wired glasses were bought in the year 1961-62 to be in readiness for construction of Blocks VII, VIII, IX and X which had been approved by the Board of Directors. The purchase was made in anticipation of the Government sanction, as they said, it was their experience that works were held up for want of timely availability of materials. They stated that unfortunately sanction from the Government for this construction did not materialise and there was a temporary lull in this construction activity. Regarding disposal of the wired glasses after Government's disapproval for construction of the factory blocks, the Management stated that it was expected that the glasses would not be surplus as they hoped to get some more Government sanctions for construction in the next few years. They did get piece meal sanctions under expansion projects for which some quantities of glasses were used. It was further mentioned that by the time Bureau of Public Enterprises took up the question of disposal of surplus materials available in various projects *vide* Circular No. 1001 Adv. (C) Cir, 27/67 of 4.10.67, they had no glasses to dispose off.

9.35 In reply to a question whether the wired glasses could not be put to any alternative use in the construction work, the Management stated in a written reply that they had used all serviceable wired glasses except 9195 complete and 13498 pieces of damaged glass which were sold.

9.36 Regarding arrangement for the proper storage of the glasses the Management stated that due to paucity of proper storage accommodation for construction materials during the period in question the glasses were stacked in their crates in open area. They further stated that open storage of wired glasses, especially in their crate packages was not an uncommon practice. As regards the damage in question, it occurred due to uneven sinking of the ground under their weight over a period of time.

9.37 The loss amounting to Rs. 1,21,353.93 had been written off by the Board of Directors in their meeting held on 16.3.1971. This amount included the loss on account of fire to the extent of Rs. 67000/- approximately. The Management further explained that such cases were promptly reported to the competent authority for write off. In this case the finalisation of claim with LIC, salvaging of the serviceable glasses and their sale took time. Since it was necessary to first ascertain the exact amount to be written off, the matter was put up to the Board of Directors after action stated above had been completed.

9.38 The Committee note that the Company imported in 1962-63, 70,750 numbers of wired glasses from Poland against sterling payment (Rs. 8,69,494) for use in the proposed construction of four factory blocks in anticipation of Government's approval which was ultimately withheld. On 5th April, 1967 about 5,100 Nos, of glasses were damaged as a result of fire. 11,816 wired glasses were found short on physical verification conducted on 13th October, 1967 due to breakage. The Company thus suffered a loss of Rs. 1.22 lakhs. The Committee find that undue haste has been shown for importing the glasses (without waiting for formal approval) against much needed foreign exchange. Secondly, sufficient care was not taken to make proper arrangements for storage of the glasses with the result that, the Company sustained a financial loss not only because of the damage caused to the glasses but also by keeping their capital blocked

for a number of years. The Committee recommend that construction stores should not in future be imported/procured unless the Management had obtained the approval of Government for the proposed construction for which the material is required . Proper arrangenents should always be made for the storage of material particularly delicate and breakable till it is consumed.

The Committee understand that by the time the Bureau of Public Enterprises took up the question of disposal of surplus material available in various projects vide their circular of 4th October, 1967, the Company had no glasses to dispose off. This shows that the glasses must have been salvaged and sold by the Company in September, 1967. The Committee also understand that the amount payable by the Insurance Company became known in May, 1969 and the matter was reported to the Board of Directors thereafter. The Committee deprecate the delay of about two years in reporting the matter to the Board of Directors.

S. No.	Item	Remarks

9.39.2. Components—With a view to meeting the production requirements according to the sales forecasts in the Switchgear and Controlgear Departments, the Company placed two orders with M/s. Associated Electricals Industries on 31st October, 1964 and 10th December, 1964 for the supply of welded assembly frame work for C-25 T.T. mechanism and chain retainers and S.P.L. 25 operating mechanism respectively . The purchase orders did not provide for any specific date of delivery of the material.

In regard to the order placed on 10th December, 1964, the deapartmental purchase requisition was forwarded by the indenting department concerned to Purchase Department on 7th October, 1964 alongwith the offer dated the 18th August, 1964 valid for 60 days, a normal practice in case of quotations received direct from M/s. AEI by that Department and was received by the Purchase Department on 22nd October, 1964. As the validity of the offer had already expired , the Purchase Department approached the Suppliers for extension of the validity period upto November, 1964. M/s. AEI agreed to the extension subject to price variation clause.

The Company was in a position to manufacture the items ordered but the above two orders were placed with a view to meeting production programme for 1965-66. As the supplier could not make supplies earlier, the Company's London Office was asked in January, 1966 to get those orders cancelled upto the maximum quantity. M/s. AEI did not accept the cancellation and demanded the-cancellation charges of 29,900 on the plea that heavy expenditure had already been incurred in the process of manufacture. The Company accepted the supplies against those orders which were received during February, 1966 and May, 1967. The purpose of placing order which involved the payment of £ 50,789 in foreign exchange was thus defeated ; the amount could have been saved had the orders been placed after satisfying about the suitability of the delivery period. Had the components ordered on 10th December, 1964 been manufactured at Bhopal the Company could have saved Rs. 3,68,130.

9.40 The Committee desired to know the circumstances for placing the 2 purchase orders with M/s. Associated Electrical Industries of U.K.

on 31-10-64 and 10-12-64 without providing for any definite date of delivery of the material. The Management stated in a written reply that during the year 1965-66, the Switchgear shop had to meet the customers' demand to the tune of 750 numbers of 11 KV with spring closing machanism. This spring closing mechanism was a very complicated assembly of a number of components requiring very high degree of skill both in manufacturing and assembly and based on the experience of the year 1964-65, during which against an expected output of 10 such assemblies per week the actual out put was hardly 6 per week, it was considered desirable to import fully assembled spring closing mechanism to the tune of 250 numbers from AEI and make remaining 500 numbers at Bhopal itself. Accordingly the two orders were placed on AEI with delivery to be completed within 2½ years and 21 months respectively.

Even though the deliveries quoted by AEI did not fully meet their requirements for the year 1965-66, it was considered essential to order out these 250 number as a parallel measure and request AEI to expedite the deliveries.

AEI however, revised the delivery schedule for their order of October, 1964.

This had been accepted and the actual deliveries had been made from December, 1965 to November, 1966 which generally conformed to the deleveries indicated by them in their quotations.

9.41 Regarding order No. PA 1890 of 10-12-1964, as the AEI could not conform to the delivery conditions mentioned in their quotations.

In January, 1966, AEI expressed their inability to improve the deliveries, it was felt that the order may be cancelled since the supplies would not be forthcoming for the productions programme of 1965-66. But AEI demanded cancellation charges amounting to the full value of the order and being a regular consumption item it was considered more economical not to cancel the order but get the components, instead of paying exhorbitant cancellation charges.

9.42 The Committee asked the reasons for not dealing with the supply order placed on M/s. AEI on 10-12-64 promptly within the validity period thereby avoiding the extra expenditure of Rs. 52,460. The Management stated that the purchase could not be concluded within the validity period of the offer in view of the fact that the matter of procurement had to be gone into in great details, in relation to the requirements and capacity available at Bhopal and as such the 60 days allowed became insufficient. They further stated in this connection that competence to judge the technical suitability of the offers received was then being just developed among their engineers.

9.43 Explaining the justification for the import of these items which could be manufactured at much less cost in the factory itself, the Management stated:—

"The ordering of components could not have been avoided, because at that stage of development of production activities it was essentially a matter of procurement of certain items which were needed till such time as the standard of skills had been develpoped to reach the necessary rate of production. If these components were taken up for manufacture at Bhopal it was feared that considerable delays would have taken place in fiinshing the products. The cost of such delays would have been financially much more than any savings which could have been effected if the components were manufactured at Bhopal itself."

9.44 The Management informed that the components against the two orders in question were received at Bhopal between July, 1966 and August, 1967 and that all the components had since been fully utilised.

The Committee asked why the Consultants should have not been approached for extension of validity period before it expired. The Management explained that the validity available was only 60 days from the date of the quotation on an issue like this where the attempt was to boost up production by importing from abroad but the deliveries being quoted by the suppliers were approximate and qualified. Accordingly extension in validity was asked for but only on 5-11-1964 whereas the quotations had expired on 18.10.1964.

9.45 The Committee note that the two purchase orders placed on M/s Associated Electrical Industries, U.K. by Heavy Electricals (India) Ltd., on 31st October, 1964, and 10th December, 1964 did not provide for any specific date of delivery of the material. The Committee also note that in regard to the order placed on 10-12-1964 the departmental purchse requisition and the offer dated 18-8-64 valid for 60 days received direct from M/s. AEI were forwarded by the indenting department to Purchase Department after the expiry of the validity of the offer with the result that Purchase Department had to approach M/s AEI for extension of validity to which they agreed subject to price variation clause. Though the two orders were placed abroad for meeting the production programme of the Company for 1965-66 as the supply was sufficiently delayed, it was proposed to cancel the orders. When M/s AEI demanded £ 29,900 as cancellation charges, the Company was prepared to accept the supply against those orders in February, 1966 and May, 1967. The Committee find that the very purpose for placing orders which involved payment of £ 50,789 in foreign exchange was defeated because of the inordinate delay in supply. The Committee are surprised at the careless way in which such an important time bound case affecting the progress programme was handled. The Committee feel that the case deserves a thorough probe which should be initiated, the responsibility fixed and suitable action taken against the defaulters. The Committee also recommend that purchase orders with foreign firms should be placed only after satisfying fully about the suitability of the delivery period, keeping in view their past performance in the manufacture and supply of the components.

9.46 (b) Cases of sale of imported materials to other parties on their request were also noticed in Audit. An important case in this report is mentioned below :—

Item	Party to whom sold	Whether sanction of C.C.I.E. obtained for sale	S.O. No. and Date	Total sale Price (*Rs. in lakhs*)	Remarks
1	2	3	4	5	6
CRGO Steel Grade 46	M/s. Guest Keen Williams Ltd., Bombay.	Yes	8121/SR 1-5-69	15.54	The Company placed three orders for 2,500 M.T. of this type of steel with the foreign firms during the period from 15th September, 1967 to 31st January, 1968. While the supplies against the last two orders for 750 tonnes each were under execution the Production Planning Department (Transformer Division) found that the stocks already with the Company were in excess of immediate requirements and desired that the supplies be deferred till August, 1969. Part supplies which had already been shipped or were under shipment were accepted and the balance quantity of steel was ordered in grade 41, a superior quality of steel. M/s. Guest Keen Williams, Bombay who were experiencing difficulty in the procurement of steel approached the Company for the issue of steel on loan in January, 1969. 300 M.T. of steel was sold at issue rate (Rs. 4,263 per M.T.) plus 21.5% to cover the commercial and Administrative charges, i.e., Rs. 5,180 per M.T. because there was low demand for transformers with this grade

1	2	3	4	5	6
					of steel from the customers. Even after disposing of this quantity, the Company had in stock a quantity of 748.460 M.T. as on 31-12-1969.
					It was intimated to Audit in April, 1969 that the steel purchased was not in excess of requirements and was hardly sufficient for orders in hand.
					The quantity was, however, sold after obtaining the approval of the Chief Controller of Imports and Exports at no profit no loss basis; but this deprived the Company of the benefit of import licence involved in the importation of this material.
					For items not declared surplus but sold to customers the Company normally charges issue rate plus 50% on account of Commercial and Administrative charges. Levy of reduced percentage towards Commercial and Administrative charges resulted in short realisation of Rs. 3,64,350.

9.47. The Committee pointed out that in May, 1970 the Ministry of Industrial Development informed Audit as follows :—

"In April, 1969 it was felt that with the introduction of 220 K.V. class transformers and the high premium customers placed on core losses, there is need to bring in much superior 41 grade in the place of 46 grade. From this point of view it was considered to be the advantage of the Company to see a portion of 46 grade which were in excess of immediate requirements."

9.48. The Committee also pointed out that the Superintendent Transformer Division had, expressed the following view in a letter dated 24-4-1969 to the Works Manager :—

"Except in case of 4 Transformers, the rest of 144 pending customers orders are designed to take 46 Grade Steel. In fact the stock on hand and the quantities yet to be received are insufficient to complete the orders in hand. In addition 46 grade steel will continue to be used alongwith 41 grade for new customers orders to be booked in future as grade 41 steel is not replacing grade '46' but it is a new addition to the type of cold rolled steel being used by us."

9.49. The Committee enquired that in view of the opinion of the Superintendent, Transformer Division, whether it was advisable to sell 46 grade steel to the private firm and wanted to know the authority who expressed the view that a portion of 46 grade steel in stock was in excess of immediate requirement. The Management stated in a written reply that the re-sale order for 300 tonnes of 46 Grade CRGO steel was issued on 1-5-1969. On that date the stock on hand of this grade was about 1780 tonnes. The stock as on 29-5-1970 was 389 tonnes and there had been no receipts of this grade between these two dates. With the rate of consumption at that time and taking into account the material in transit, there would be sufficient sheet steel of this grade at least for the next 6 months. Thus, if this resale was not affected, this quantity (of 300 tonnes) would have been carried in stores as idle inventory for 14 to 16 months. When the decision to resell was taken, *i.e.* in April, 1969, the position was that with the introduction of 220 KV class transformers and the high premium that customers placed on core losses, there was need to bring in more of the superior 41 grade in place of the 46 grade. But the 46 grade would also continue to be used for certain transformers, in reduced quantities. From this point of view it was considered to be to the advantage of the company to sell a portion of this material which was in excess of immediate requirements at that time. The actual consumption figures for the past one year had shown that this was a correct decision.

9.50 The Management further stated in this connection as follows :—

"It is stated that the Company intimated to Audit that the Steel purchased was hardly sufficient for the orders in hand. It has to be pointed out here that the orders for transformers in hand in May 1969, were for more than one year. In an effort to keep down the inventory levels to the minimum, a review was made of the sheet steel position in April, 1969, and the decision to sell 300 tonnes was taken only after ensuring that the balance stocks will be sufficient to carry on production without hold up and, at the same time, reduce inventory levels.

The approval of the sale was accorded to by the then Chairman and Managing Director, with the concurrence of Finance."

9.51. The Committee asked if HEIL had purchased 46 grade steel after effecting the sale of the same grade steel mentioned in the Audit Report (Commercial), 1970, Part V and if so, how the rate of new procurement compared with that which was sold. The Management stated in a written reply that the total of 2500 MT of CRGO steel was ordered abroad between 15-9-67 and 31-1-68, out of which 2200 MT was for Grade 46 and the remaining for grade 41. The next order for Grade 46 steel was placed after nearly 3 years (on 14-12-70) for approximate, 650 tonnes, whereas during the same period approximately 2400 tonnes of grade 41 steel was purchased. They added that this clearly indicated that grade 46 steel was being used less and less as time went by. They also said that presently all purchases of CRGO steel were of grade 41 only. They informed that the above-mentioned subsequent order for 650 tonnes for grade 46 steel was placed at approximately £ 20 per MT more than the previous price of £ 167.1.8 which was about 12% more in a period of about 3 years.

The Committee enquired as to why the steel was sold at rate lower than the normal rate, to the private firm which resulted in short realisation of Rs. 3,64,350 and whether the approval of the competent authority was taken for charging lower rate and whether the Finance Branch was consulted in this connection. The Management of the Company stated in reply as below :

"As for the rate at which re-sale was effected, the import control regulations stipulated that the transfer of materials is to be made to the actual user only and the rates should be fixed taking into account (i) the CIF value (ii) customs duty and landing and clearing charges (iii) transportation charges and (iv) other reasonable incidental charges incurred in relation to the imported goods, *vide* Rule 94 of the Import Trade Control Regulation. Based on this the total cast per tonne taking factors (i) to (iii) obove, worked out to Rs. 4263.50 per metric tonne, to which departmental charges of 21.5% are added bringing up the sale value to Rs. 5180/- per metric tonne. These departmental charges are the reasonable incidental charges incurred in relation to the imported goods referred to in rule No. 94. This sale is governed by the conditions of Rule No. 94 referred to above ; the 50 % charges recoverable, as mentioned in the Audit Report Commercial 1970, Part V, pertain to normal commercial sale of spares.

Through this sale the Company was able to recover 21.5% over and above its procurement cost. If the sale was not effected there would have been a loss to the Company in the form of inventory carrying costs in addition to interest charges for 14 to 16 months, which may come to about 15%. Thus saving to the Company as a result of re-sale is 21.5% + 15% = 36.5%."

9.52. The Committee note that while the supply of 1500 MT CRGO Steel Grade 46 ordered with the foreign firms was under execution, the Production Planning Department (Transformer Division) of the Company found that the stocks already with the Company were in excess of their immediate requirements. The Committee also note that the 300 M.T. of this steel was sold on 1st May,

1969 to M/s. Guest Keen Williams of Bombay who were experiencing difficulty in the procurement of that steel. The Committee find that the steel was sold at issue rate plus commercial and Administrative charges at a reduced percentage which resulted in short realisation amounting to Rs. 3,64,350. Subsequently the Company procured 650 tonnes of the same grade CRGO steel at approximately £20 per MT more than the privious price order for which was placed on 14-12-70. The Committee observe that Heavy Electricals (India) Ltd. had not only to pay £13,000 (Rs. 2,34,000/-) extra for the same grade of which they had sold earlier but had also to forego the benefit of import licence to that extent. The Committee are somewhat intrigued by the unusual concern shown by the Heavy Electricals in reducing their inventory in this particular scarce material i.e. CRGO Steel grade 46 and that too in favour of a private party. The Committee are not sure whether inventory in respect of other imported items also has been/was restricted to the same period of requirement or it was particularly considered necessary in the case of imported steel and that too in a particular grade.

The Committee are not convinced about the justification for charging lesser rate of departmental charges in this case when in the case of sale of surplus items departmental charges at the rate of 50 per cent of the issue rate is normally charged and when import control regulations do not stipulate a particular rate of recovery while calculating the so called saving, management appear to have taken into account interest charges at 12 per cent against which the interest paid by the Company on cash credit to the State Bank of India is only 8 per cent. If there was an anxiety to reduce the inventory in steel for this particular grade it would have been better for the undertaking to exchange it with steel of the requisite quality from another sister Public Undertaking or by disposing it of to another Public Undertaking. The Committee are not convinced by the explanation given by the Management. The Committee recommend that Government should consider undertaking a probe in the matter.

The Committee feel that Government should also issue suitable instructions to ensure that transactions of this nature, particularly in scarce and imported raw materials, do not recur.

X

FINANCIAL MATTERS

A. Operating Results

The comparative operating results during the last 6 years are indicated below.—

S. No.		1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
I Output							
1.	Sales .	742.72	1,108.55	1,485.31	2,397.64	2,156.60	2,668.90
2.	Additions to finished goods .	83.82	140.56	121.56	334.99	166.83	275.86
3.	Additions to Works-in-progress . .	159.32	467.30	672.61	628.71	529.66	81.14
4.	Transfer for Internal use .	27.66	25.67	21.45	39.21	30.40	25.96
		1,013.52	1,742.08	2,300.93	3,400.55	2,549.83	2,889.58
II Input							
1.	Direct Material	500.22	874.39	1,355.99	2,170.21	1,334.76	1,380.55
2.	Conversion Cost						
(i)	Direct Labour	51.40	54.35	61.61	67.00	66.97	85.59
(ii)	Direct Expenses	..	16.27	23.21	30.59	21.29	30.05
(iii)	Factory Expenses	604.61	744.89	706.02	799.38	826.69	915.54
(iv)	Tools & Pattern Charges . .	30.11	29.17	15.52	18.28	18.79	18.56
(v)	Engineering Expenses . .	89.48	86.96	85.91	96.17	101.27	108.22
Total Conversion Cost		775.60	931.64	892.27	1,011.42	1,035.01	1,157.96
3.	Training Expenses written off .	46.89	47.86	47.88	47.56	47.45	47.26
4.	Consultancy charges . .	38.60	73.14	52.51	42.19	34.19	16.59
5.	Manufacturing Tools and Pattern . .	30.85(—)	37.04(—)	18.14(—)	8.91	7.95	0.51
	Manufacturing charges . .	1,330.46	1,890.01	2,330.41	3,262.44	2,443.46	2,601.85

8 LSS/72—9

	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
III Percentage of manufacturing charges to output . .	131.27	108.49	101.23	95.99	95.8	90
IV Manufacturing Loss(—) Profit (+) . .	(—)316.94	(—)147.93	(—)29.48	(+)138.11	106.37	287.73
V Selling and distribution .	29.38	40.38	65.03	91.99	114.26	104.94
VI General Administration .	107.66	104.13	105.80	118.01	115.64	118.01
VII Interest . .	191.48	270.79	365.62	447.40	572.34	544.86
VIII Effect of Devaluation . .		79.90	44.53 (Credit)		..	
IX Net expenses on Township—less interest . .	29.04	33.44	58.68	65.19	79.73	74.78
	674.80	676.57	580.08	584.48	775.60	578.19
Percentage of Net Loss to output . .	66.58	38.84	25.21	17.19	27	17

NOTE: 1. the figures for the years 1965-66 to 1967-68 were recast during 1968-69 to make them comparable.

2. (+) represents profits or deduction in expenses.

10.2. The value of output for the year 1968-69 includes work-in-progress which in turn includes raw materials directly charged to work- in-progress but not processed at all, worth Rs. 641.94 lakhs as against Rs. 143.96 lakhs included in the output of 1967-68. The output also includes sale value of purchases made (Rs. 152 lakhs in 1967-68 and Rs. 676 lakhs (1968-69). If the sale value of purchases resold and the value of raw materials and components not processed are excluded, the value of real output turned out by the Company works out to Rs. 2096 lakhs and Rs. 2227 lakhs during 1967-68 and 1968-69 respectively. On this basis the percentage of net operating loss (after excluding profit on resale of purchases) to output works out to 29 (approx) and 32.4 during 1967-68 and 1968-69 respectively.

10.3. It will be seen that for the first time in 1968-69 there was a manufacturing profit of Rs. 138.11 lakhs. This was mainly on account of a profit of Rs. 118 lakhs earned on purchases resold. The corresponding profit in 1967-68 and 1966-67 on such purchases resold was Rs. 24 lakhs and Rs. 23 lakhs respectively. The profit on re-sale of goods purchsed, as mentioned above, is again based on the selling price fixed by the Company which has not been finally accepted by the customers.

10.4. During evidence the Committee enquired the reasons for increase in the selling and distribution expenses from 65.03 lakhs during 1967-68 to Rs. 91.99 lakhs during 1968-69 and to Rs. 114.26 lakhs during 1969-70.

In this connection the Chairman of Heavy Electricals (I) Ltd. replied as follows :—

"The expenditure rise in 1968-69 is due to the fact that we introduced from that year "after sales reserve" and we made a provision of Rs. 21.76 lakhs under the head "after sales reserve". There are other charges which have also raised the expenditure. For example, we have to pay royalty and service charges to the collaborates. Because of the increased production, there was an increase in the service charges and royalty payment to the collaborators which amounted to Rs. 2.34 lakhs.

Then there is the normal increment in other heads. Then there was the bank charges of Rs. 2.21 lakhs which was to be paid in 1968-69. Then in 1969-70 there was again further increase in the expenditure on account of "after sales reserve" service.

Now that the goods produced have started going outside and the plant production has been brought under this category, the expenditure incurred by the branches in Madras, Calcutta and Bombay has also been shown under this head. It will be noticed that while under this covered charges the expenditure has slightly gone down for the year 1969-70, the normal increase is not there, that is because certain expenditure has been changed from one place to another."

10.5. Asked about the customers payment, the Financial Adviser of Heavy Electricals (I) Ltd. stated as follows :—

"We have a system of advance payments in respect of plant project . Our system is that we charge from our customers an advance amount of 10% After six months' period, they pay again 10% advance Like this we keep on charging advances but on the supply side, on our shop floor there is a manufacturing cycle. Side by side, there is a further work which ends at the customer's point. So, for the hydro-turbine while we are working on the shop floor on our product, the first thing that we do is that we send out the parts that are to be embeded in the foundation itself. Now those parts are sent out while the generators and other things are being supplied. There is no separate billing of those embeded parts. We despatch those articles and other things for which we charge them in advance. We keep on delivering the goods as and when required and it is only after the final delivery that the final billing and adjustment of the advances is worked out."

10.6. The Committee also note that in 1968-69 there was a manufacturing profit of Rs. 138.11 lakhs for the first time. The bulk of this profit (Rs. 118 lakhs) was, however, earned on purchased resold. The corresponding profit on such purchases resold during 1966-67 was Rs. 23 lakhs and during 1967-68 it was Rs. 24 lakhs. The resale of goods purchased was based on the selling price fixed by the Company which had not even now been finally accepted by the customers. The Committee are of the view that the real operating results of the Company are far from satisfactory. For manufacturing concern

of the size of Heavy Electricals (India) Ltd. reselling of purchase made at a large margin of profit can hardly be considered as an important achievement.

10.7. The Committee recommended that selling prices for resale of machinery and equipment purchased should be settled in advance to obviate misunderstanding and long drawn out correspondence. The Committee also recommend that every endeavour should be made to improve the real output of the Company.

Financial Position

10.7. A summary of the financial position of the Company under broad headings for the last three years in given below :—

(Rs. in lakhs)

LIABILITIES	1970-71	1969-70	1968-69
(a) Paid up capital	5,000.00	5,000.00	5,000.00
(b) Reserves and surplus . . .	1.30	1.30	1.13
(c) Borrowings :			
(i) From the Government of India .	7,363.40	7,023.01	5,951.09
(ii) From Foreign collaborators (including interest accrued and due)	6.16	137.37	137.43
(iii) From bank-cash credit . .	100.04	626.69	286.31
(iv) Deffered payments (credits) (including interest) . .	225.74	228.24	141.99
(d) Trade dues and other current liabilities (including provisions) . .	5,439.44	4,576.36	4,921.66
TOTAL .	18,136.08	17,592.97	16,439.61
ASSETS			
(e) Gross block	7,013.17	6,887.79	6,588.76
(f) Less : Depreciation . . .	2,508.20	2,222.60	1,938.83
(g) Net Fixed Assets	4,504.97	4,665.19	4,649.93
(h) Capital Works-in-Progress . .	52.69	34.37	85.92
(i) Other Assets (Plant and Machinery in stock and awaiting crection in transit and unallocated expenditure)	234.05	276.91	309.19
(j) Investments	4.10	1.76	—
(k) Current Assets, Loans and Advances	7,267.73	7,086.01	6,806.28
(l) Miscellaneous expenditure :			
(i) Accumulated losses . . .	5,987.28	5,376.32	4,376.42
(ii) Deferred revenue expenditure .	81.05	148.21	207.66
(iii) Others (Preliminary expenditure)	4.21	4.21	4.21
TOTAL .	18,136.08	17,592.97	16,439.61
Capital employed	6,345.87	7,161.90	6,534.02
Net Worth	(—)1,071.24	(—)527.44	412.84

NOTE :—

1. Capital employed represents net fixed assets plus working capital (excluding gratuity provision and deferred credit interest suspense).
2. Net worth represents paid-up capital plus reserves less intangible assets (i.e. miscellaneous expenditure at (l) above).

10.8. The Committee find that Paid-up capital of Heavy Electricals (India) Ltd. is Rs. 50 crores. Its accumulated losses as on 31-3-1971 amount to Rs. 59.87 crores. This shows that the Company has already eaten up its entire Paid-up Capital. The Committee are perturbed over this grave financial position of the Company. The Committee stress that the Company should improve its financial position by greater utilisation of its capacity by effecting maximum economies and review of its pricing policy. The Committee also recommend that Government should review the capital structure of the Company to see if some changes are called for to improve the financial situation.

B. Credit control

10.9. The Company had arranged credit facilities with the State Bank of India to the extent of Rs. 24.50 crores.

The interest paid to the State Bank of India during the last four years and the amount outstanding on account of overdraft on 31st March of each year is detailed below:—

Year	Total interest paid to State Bank of India	Balance on account of over draft as on 31st March
		(Rs. in lakhs)
1966-67	56.83	682.94
1967-68	52.31	955.12
1968-69	82.33	0.05
1969-70	80.12	626.69
1970-71	52.90	100.04

10.10. The Committee pointed out that during 1968-69 the credit utilisation from State Bank of India declined to a negligible amount of Rs. 0.05 lakhs as on 31-3-69 but it again shot up to Rs. 626.69 lakhs as on 31-3-1970 and asked for the main reasons responsible for this position.

10.11. The Management of the Company stated in a written reply that the cash credit utilisation vis-a-vis the receipt from the customers from 1967-68 onwards was as under:—

Year	Cash credit utilised for the year	Cumulative	Receipts from customers
1967-68	273	955	1,870
1968-69 . . .	(—)955	—	3,426
1969-70 . .	627	627	2,682
1970-71 . . .	(—)527	100	4,103
1971-72 . . . (Upto Sept'71)	426	526	1,431

From the above figures it became evident that the cash credit utilisation was highly dependent upon the realisations from the Company's customers.

Book Debts

10.12. The following table indicates the value of the book debts *vis-a-vis* debts written off as bad debts and the sales during the last five years:—

(Rupees in lakhs)

Year	Total book debts considered good	Total book debts considered doubtful	Total	Debts written off	Sales	Percentage of debtors to sales
1966-67 . . .	424.71	3.37	428.08	—	1134.22	37.7
1967-68 . . .	612.82	3.93	616.75	0.58	1506.76	40.9
1968-69 . . .	1078.79	5.09	1083.88	—	2436.85	44.5
1969-70 . . .	1550.11	7.17	1557.28	—	2187.00	71.2
1970-71 . . .	1526.57	10.14	1536.70	—	2694.85	51.0

10.13. The following table shows the details of debts outstanding for more than one year as on 31st March, 1971 and its distribution between the Government and private parties:

(Rupees in lakhs)

	Government Departments	Private Parties
1. Debts outstanding for more than one year but less than two years	83.72	20.56
2. Debts outstanding for two years and more but less than 3 years	29.08	12.88
3. Debts outstanding for 3 years and more	17.91	33.21
	130.71	66.75

10.14. The following reasons were attributed for the accumulation of debts:—

(i) Most of the customers of the Company are Government/Semi-Government Undertakings. The paucity of funds with some Electricity Boards delays the payment.

(ii) Some parties insist for bank guarantees before releasing payments, which is not acceptable to the Company.

(iii) Delay in the adjustment of certain claims of shortages in transit, demurrage/wharfage charge, etc.

(iv) Delay in the settlement of prices of the products supplied by the Company.

(v) Reluctance on the part of the customers to pay against part despatches.

10.15. The Committee pointed out that the position of outstanding debts as on 31-3-1970 had much deteriorated in comparison to the position as on 31-3-1969. The outstanding against Government Departments and private parties nad also increased sufficiently and asked the reasons for the heavy increase in the outstanding dues as on 31-3-1970.

10.16. The Management stated in a written reply that the sales figures and the debts given in the published Accounts were gross figures which included the value of Goods Despatched but not billed as they were not billable under terms of the contract. The position of sales involved and the corresponding Sundry Debtors is given in the following table:—

Year	Sales Un-billed	Sy. Drs. unbilled/ deferred/ others	Sale in-voiced	Sundry Debtors in-voiced
1967-68	160	237	1,325	379
1968-69	478	663	1,920	416
1969-70	527	1,001	1,630	549
1970-71	534	689	2,135	838

10.17. They also informed that the apparent increase in Sundry Debtors at the end of year is partially due to the figures of debtors being cumulative, while the sale is for the year only. Another major reason is the fact that the sales invoiced in the last quarter ending March, 1971 amounts to Rs. 1043 lakhs. Generally it takes 3 months in realising the dues after invoicing. On 30th June, 1971 the position of the outstanding with age-wise analysis was as below:—

(Rs. in lakhs)

	Prior to 3/67	4/67 to 3/70	4/70 to 31-3-71	Total
Railways	0.72	6.78	168.48	175.98
Govt. Departments	1.80	9.06	26.63	37.49
Electricity Boards	18.45	48.91	300.95	368.31
Govt. undertakings	1.24	11.69	14.91	27.84
Other Parties	1.86	6.39	21.74	29.99
	24.07	82.83	532.71	639.61

10.18. The Corporation stated that railways and the Electricity Boards were the major debtors and even in their cases, old debts were not substantial.

10.19. It was further stated that there were only 2 hydro contracts namely Sambol and Khodri for which prices had not yet been finally settled in respect of Turbines and Generators. The total amount outstanding as on 31st March, 1971, for these two contracts in respect of these products was Rs. 1.14 lakhs. Action was being taken to have the prices finalised.

10.20. The Management further stated in a written reply as follows:—

"The realisation of dues from the customers is being systematically reviewed by the Management and also by the Board of Directors every quarter and it is considered that the steps taken by Company are adequate in this regard.

In compliance with the Board's directive, interest clause is now included in all our contracts. However, for reasons for customer relations we do not implement this clause generally. Similar courtesy is observed by the customers when there is a delay in the delivery of the equipment. The customer also does not insist on interest charges on advance payments made during the execution of the contract. Further, in most of the cases the customer accommodates HEIL by not insisting on the liquidated damages which are legitimately chargeable due to delays in the delivery."

Claims Recoverable

10.21. The table below indicates the claims outstanding at the close of last 5 years.

	Amount outstanding as on (Rupees in lakhs)				
	31-3-1967	31-3-1968	31-3-1969	31-3-1970	31-3-1971
(i) Claims with carriers and underwriters . . .	23.05	71.44	40.43	29.76	20.52
(ii) Claims with Port Trust Authorities . . .	0.98	2.42	3.75	0.12	0.15
(iii) Claims with customs Authorities.	37.22	44.50	37.81	27.28	13.19
TOTAL . . .	61.25	118.36	81.99	57.16	33.86

Failure to lodge claims within time

10.22. As on 31st March, 1968, there were 247 claims valuing about Rs. 10,17,338 pending settlement with the INSPOOL, Bombay. These claims pertained to the period from 1963 to 1965 and included both Sterling and Rupee claims.

10.23. Under directions from the Government of India, the Company's insurance business with the INSPOOL was discontinued with effect from 1st January, 1966 except for pending claims. The INSPOOL was winding up and its affairs were now being managed by an *ad hoc* Committee set up for the purpose.

10.24. As on 31st March, 1968 about 55 claims valuing Rs. 1.80 lakhs had already been repudiated by the said underwriters as time-barred or on the ground that the packing cases had been received intact and the underwriters were not responsible in respect of shortages in those packages.

10.25. Responsibility for the delay in filing claims had not been fixed till November, 1969. No recovery could also be effected by the Company from the suppliers in respect of shortages where packing cases were received intact and the claims had been rejected by the Insurance Pool. The above loss of Rs. 1.80 lakhs had also not been reported to the Board of Directors till November, 1969.

10.26. The Management intimated to Audit (December, 1969) that "each individual case is being examined with a view to see whether any recovery could be made from the Suppliers. After this examination is over, only such cases where the losses occur, will be reported to the competent authority."

10.27. In a written reply the Ministry of Industrial Development stated that 247 claims as reported pending on 31-3-68 with the Inspool Bombay were pending with them due to the fact that the Inspool wound up their activities of under writing with effect from 1-1-1966 when all Government undertakings were asked to place their Insurance business with the LIC of India. On account of this change over the staff in Inspool got reduced very considerably with only an *ad hoc* committee set up for winding up of their office. The delay in settlement of these claims was mainly due to the very slow pace of working at the inspool.

10.28. The Inspool had in the earlier years not rejected any claims as time barred but started doing so only after their activities were brought to a close on 1-1-1966.

10.29. As regards the 55 time-barred claims of the value of Rs. 1.18 lakhs referred to above, the position has been examined in detail by the Company and they find that in certain cases claims on inspool were not substantiable as the material was finally received and accounted for at the HEIL. After due examination, cases involving losses of small amounts have been closed with the write off of the small accounts involved.

10.30. The Company was able to settle a majority of the claims outstanding with Inspool. Leaving only a few hard core cases amounting to a few thousand rupees pending settlement.

10.31. A consolidated picture could not be put up to the Board earlier as the position was rather fluid and settlements in majority cases could be done only after the lapse of time as explained above.

Loss due to failure to avail of concessional Customs Duty

10.32. Under the Indian Customs and Central Excise Tariff Act, 1964, as amended from time to time, the components/parts of any machinery required for the initial setting up of that machinery for its assembly or manufacture, are exempted from the payment of customs duty of a part otherwise leviable subject to the fulfilment of certain conditions of a bond.

10.33. In Section VII (1) of Audit Report (Commercial), 1966, it was mentioned that the Company failed to take advantage of legal concession as necessary certificate could not be obtained from the Directorate of Technical Development.

10.34. The first bond for a sum of Rs. 5.1 lakhs was executed by the Company in June/July, 1964 and the next bond on 23rd April, 1968. The Company, however, continued to pay the customs duty at full rates claimed by the Customs Authorities at the time of clearance of goods on the component parts during the period the Company had not furnished the bond and subsequently claimed refund, resulting in blocking of the large amount so paid. After the expiry of the bond executed the Company paid Rs. 7.15 lakhs as additional customs duty on the components needed for the setting up of the machinery, for the refund of which claims had been lodged with the Customs Authorities. The claims were started to be pending with the Central Board of Revenue, and due to the non-furnishing of the bond, etc., the Company had lost Rs. 60,000 approximately by way of interest on the money so blocked up with the Customs Authorities.

10.35. The Ministry have stated (May, 1970) as follows:—

"At the initial stage of our factory the Engineering Department, Indentor-User-Department and Purchase Department had to gear up the necessary machinery for compiling the various technical information in respect of the provisions of the Customs Notification No. 82/60, to submit the same to the Customs Department along with the bond.

However, the initial difficulties had been overcome and the "Essentiality Certificates", are being regularly furnished to the Customs Department. The Customs Department insisted that the bond should be executed prior to clearance of the goods. Hence the same was executed on 23-4-1968."

It is, therefore, clear that the 'Essentiality Certificate' could not be prepared by the Management in time for execution of the bond, which resulted in loss of concession.

10.36. The Committee note that the balance on account of overdraft has increased from Rs.0.05 lakhs in 1968-69 to Rs.100.04 lakhs in 1970-71. The Committee view with concern that there has been no significant improvement in the financial position of the Company and that Company is resorting to heavy borrowings as a result of heavy cash losses sustained by them. The Committee suggest that ways and means may be explored by the Company to have an effective cash management system and to ensure that the financing charges are kept to the minimum.

10.37. The Committee also note that though the position of outstanding debts on 31.3.71 has shown an improvement over that on 31.3.1970, still large amounts are due to be realised from various Electricity Boards and Railways. The Committee are surprised to find that Government departments themselves are responsible to the tune of 1.3 crore of rupees remaining outstanding for periods exceeding one year. The Committee, therefore, strongly recommend

that the procedure of billing and collection of dues should be streamlined with a view to ensure realising of dues without any delay. The Committee also urge that a careful review of the outstandings should be undertaken to see that there is no overlapping of outstanding items with corresponding items of advances from the customers.

10.38 The Committee also regret the lack of promptness not only in furnishing the essentiality certificates but also in the matter of execution of filing of the bonds with the customs authorities which had prevented the Company from availing itself of the exemption from the payment of customs duty. Such unconscionable delay on the part of the company had blocked a huge sum of Rs.7.15 lakhs with the customs authorities with consequent loss of interest to the tune of Rs.60 thousand. The Committee hope that the Company would take more effective steps to avoid recurrence of such delays in future.

10.39 The Committee note that claims of the total value of Rs.20.52 lakhs have been outstanding with carriers and underwriters on 31.3.1971 and 247 claims for a value of Rs.10.17 lakhs were pending settlement with Inspool. The claims pertain to the period from 1963 to 1965 and included both sterling and rupee claims. 55 claims of the value of Rs.1.8 lakhs have been repudiated by the underwriters either as time barred or on the ground that they were not responsible for shortages. The Committee are surprised to find that the Management have not taken any action to investigate the reasons for the delays in filing the claims and to fix the responsibility, therefor on account of which the Company had been put to financial loss. The Committee understand that all the claims which were outstanding with the Inspool had been transferred to LIC with effect from 1.1.1966. The Committee need hardly emphasise the need for analysing each and every outstanding claim and persuing it with LIC authorities with a view to have expeditious settlement thereof.

10.40 The Committee would also urge that a careful scrutiny of the remaining items should be done and authorities moved at the higher level to have the claims settled expeditiously so that they may not also ultimately become time-barred or otherwise become ineligible for settlement.

C. Financial Management

10.41. After accepting the recommendations of the Committee on Public Undertakings contained in their 15th Report (4th Lok Sabha) the Government of India, Bureau of Public Enterprises issued broad guidelines in May, 1969 defining the main functions, responsibilities and powers of the Financial Adviser. The Government of India further desired that the Board of Directors should lay down the detailed powers and functions of the Financial Adviser particularly in regard to matters which should be reserved:—

1. for concurrence of the Financial Adviser.

2. for consultation with the Financial Adviser; and

3. those on which Financial Adviser need not be consulted.

The Board of Directors have, however, not considered the guidelines so far (February, 1970).

Among the major areas where the Financial Advisor was not consulted were the quotation of rates for sale contracts and fixation of sale price for part despatches. He was also not being consulted in the finalisation of purchase cases.

10.42 The Committee note that though the Bureau of Public Enterprises issued broad guidelines defining the main functions, responsibilities and powers of the Financial Adviser in May, 1969 in pursuance of the recommendation of the Committee on Public Undertakings contained in their 15th Report (Fourth Lok Sabha), the Board of Directors had not considered those guidelines till February, 1970. The Committee take a serious view of the casual way in which such important items concerning financial matters of the Company are treated. The Committee also note that the Financial Adviser was not being consulted in the following important matters:-

(i) The quotation of rates for sale contracts;

(ii) Fixation of sale price for part despatches; and

The Committee are unable to appreciate how the management of the company could exercise financial control on these important matters without consulting the financial Adviser. The Committee take strong exception to by-passing the financial Adviser in matters affecting the Finances of the Company. The Committee recommend that in future, all important orders issued by Government should be brought to the notice of Board of Directors who in turn, should consider them promptly and take follow-up action without delay. The Committee strongly recommend that in future, the prescribed principles of financial control should be adhered to by all Undertakings included the Heavy Electricals (India) Ltd., Bhopal.

D. Future projections and break-even analysis

10.43 According to the estimated operating results as per forecast made by the Company in September, 1967 for the Fourth Five Year Plan (1966-67 to 1970-71) the total output and loss anticipated for 1967-68 and 1968-69 and the actuals were as follows:—

(Rupees in lakhs)

	1967-68		1968-69	
	As per estimate	Actuals	As per estimate	Actuals
Total output	2,560	2,301	3,718	3,401
Loss	(—)560	(—)580	(—)405	(—)584

10.44 According to the fresh exercise made in September, 1969 projections of working results from 1969-70 to 1973-74 were made on the lines indicated below:—

(Rupees in lakhs)

	1969-70		1970-71		1971-72	1972-73	1973-74
	As per estimates in September, 1969 / Budget estimates	Revised Budget estimates	As per estimates in September, 1969	Budget estimates	As per estimates in September, 1969	As per estimates in September, 1969	As per estimates in September, 1969
1. Total output . .	3,613	3,001	3,897	3,649	4,661	5,038	5,219
2. Net operating Expenses	3,150	2,850	3,311	3,263	3,775	4,092	4,246
3. Interest . . .	515	540	591	673	643	650	641
4. Depreciation . .	286	286	307	301	314	318	320
5. Profit (+)/Loss(—) .	(—)338	(—)675	(—)312	(—)588	(—)71	(—)22	(+)12

10.45 The above profitability study is based on the following assumptions:—

1. Working capital is based on the inventory requirements to service next years output.

2. Finished output is based on current level of sale prices.

3. In the nət operating results the following assumptions have been made :

(*a*) Materials . . .	As per Engineering estimates according to current rate.
(*b*) Salaries . . .	From an increase of 10 per cent in 1970-71 gradually tapers to 6 per cent. in 1973-74 to settle down subsequently to 5 per cent. per annum which would represent only the annual increments.
(*c*) Wages .	A 10 per cent, increase per annum which includes 5 per cent, towards increment. The ultimate personnel strength is expected to be about 20,000 for the present scope of this project including expansion schemes. This strength will be in position by 1974-75.
(*d*) Personnel benefits .	about 18% of wages and salaries.
(*e*) Resident consultants expenses and service charges.	No provision has been made after November, 1970 when Main Consultancy Agreement expired.

4. Interest charges . . . Provided at the prevailing rate.

10.46 It would appear from the projections made in September, 1969 that the Company expects to break-even at an output of Rs. 52.19 crores in the year 1973-74.

10.45 Within a period of three months, namely, in December, 1969 while preparing the revised estimates for 1969-70 and budget estimates for 1970-71, the management felt that the projections made in the profitability study in September, 1969 would not hold good both in terms of targets of production and the expenditure under certain heads, as will be evident from the following table:—

(Rupees in lakhs)

Description	As per forward planning		As per revised estimates	As per budget estimates	Increase/decrease (+)	(—)
	1969-70	1970-71	1969-70	1970-71	1969-70	1970-71
1. Value of output .	3,478	3,727	2,866	3,479	(—)612	(—)248
2. Operating expenses (excluding direct materials, stores, spare parts, interest, depreciation and township expenditure) .	941	1,028	1,006	1,084	(+)65	(+)56
3. Interest charges (excluding township) . . .	448	523	474	605	(+)26	(+)82
4. Loss . . .	338	312	675	588	(+)337	(+)276

It would appear from the above table that the operating expenditure and interest charges were found to register an increase of Rs. 91 lakhs and Rs. 138 lakhs, inspite of reduction in the volume of output by 17.6% and 6.7% in 1969-70 and 1970-71 respectively.

10.47 Further in the profitability study, the value of consumption of materials has been estimated at a gradually reduced sliding scale ranging from 55% in 1969-70 to about 50 % in 1973-74 against the actual consumption of 60% in 1968-69. It has been explained by the Management that the reason for anticipating the reduced expenditure on account of consumption of direct materials was the expectation of increased indigenous production of components within the factory. Even assuming that the cost of raw materials and components consumed will be within the scale anticipated, the anticipation of breaking-even in 1973-74 is likely to go wrong in view of the increase in expenditure which has already taken place in 1969-70.

10.48 It may also be mentioned that in the profitability study made in September, 1969, no provision has also been made in respect of charges on account of consultancy services etc. as the question of extension of the agreement beyond 1970 with the Consultants was under negotiation at that time. Extension of the agreement beyond 1970 for Steam turbines has since been concluded and is, therefore, likely to involve additional expenditure.

10.49 The Consultants, are, however, of the view that the Company is likely to break-even only on an out put of Rs. 70 crores with the existing number of employees.

10.50 During evidence it was pointed out that according to the projections made by the Company the break-even would be attended in 1973-74 at Rs. 52.19 crores value of total out put whereas the collaborators had said that the Company would break-even if the value of production was Rs. 70 crores and enquired how this difference in view point was to be reconciled. The Managing Director of the Company clarified that the collaborators did not say that Rs. 70 crores would be the break-even level.

10.51 The Chairman of the Heavy Electricals (I) Ltd. further informed the Committee that they had worked it out after taking into consideration the factors like wage Board awards etc, that the break-even point would be Rs. 61 crores how.

10.52 The Committee pointed out that the difference between Company's figure and collaborator's figures was about Rs. 18 crores. The Chairman of the Company read out what the collaborators had said:—

"It is also demonstrated that the number of employees at Bhopal is far in excess of number which should be required for efficient and competitive. . of the present annual sale value. Alternatively, with the present number of employees the annual sales value should be of the order of 70 crores. This is not a break-even".

10.53 The Chairman, HE(I)L added that break-even would be at a level of production of 61 crores of rupees which was expected to be reached in 1973-74.

10.54 The Committee enquired whether any detailed and concrete programme had been drawn up by the Company to reach the target of Rs. 61 crores by 1974. The Chairman of the Company stated that a profitability study had been attempted.

10.55 The Chairman of HE(I)L gave the following figures of tagrets achieved during 1970-71.

(i) Rs. 28.66 crores against the target of Rs. 30.00 crores for finished goods.

(ii) Rs. 28.9 crores against the target of Rs. 35.C0 crores for gross output.

Elucidating the position further, the Chairman of the Company stated:—

"There are two sets of figures, one is the finished product and the other is the gross product which included the work in progress. That means part work is done because the cycle of manufacture is fairly long. According to the profitability study that has been made, we expect that the estimates for 1971-72 would be 33.79 crores of finished products and a gross of 40.6 crores. For 1972-73, the projections are finished products 41.46 crores and a gross of 45.72 crores. For 1973-74, finished progducts would be 55.59 crores and gross 61.59 crores."

10.56 It was enquired if Company could give break-up for the following:—

(i) the value of the product on which they have done some work and value added.

(ii) amount of these products where the raw materials had been brought and it had been shown as works in progress, and

(iii) amount where certain things had been brought and sold away without doing anything on that.

The Financial Adviser of the Company stated as below:—

"I will give the figures for the three years under the three heads. In the first category where we take the raw materials components and give out finished products, the figures are: 1971-72—33.79 crores, 1972-73, 43.87 crores and 1973-74, 55.59 crores. The work in progress changes, where we take the material, we work on it, it is a major assembly, sub-assembly completed, but it is not complete enough to be put on sale, and other auxiliary assemblies are not ready; 1971-72 300 lakhs, 1972-73 300 lakhs, 1973-74 300 lakhs."

for 1970-71 he stated that:—

"In 1970-71, the finished output, i.e. completly finished in saleable condition; 2757.43 lakhs. Under thé works in progress changes, we had really consumed material from the shop floor more than we had put in, that was minus 81 lakhs."

Clarifying the position further regarding the three categories of items, the Managing Director of the Company stated:

"There is some misunderstanding about the three categories of items where it is stated that we may buy and sell, that is not a very accurate statement of the case. An organisation like ours, has two branches—one is Engineering and Design branch and the other is manufacturing branch. Now, there are certain items for which we do the engineering and design work plus the manufacturing work.

There are a large number of items for which we have bought the designs but the manufacturing work is done on the shop floor. Then there are quite a number of items for which we have done the designing but some components were purchased for manufacturing the equipment according to our design. This is called purchase re-sale of the same material but in different form, which is done by us."

10.57 It was observed that it had been stated by the Company that the output also included sale value of purchase re-sold. Quoting from the Audit Report it was pointed out:—

"As a matter of fact, you see about the manufacturing profit which has been stated in the audit report in a para on page 26. The value of output for the year 1968-69 includes the work in progress which in turn excludes raw material directly charged to work in progress but not processed at all. That works out to Rs. 6.41 crores and then value of purchase and re-sold is also Rs. 6.76 crores. If these are substracted, then there is no manufacturing profit at all."

10.58 The Chairman, HE(I)L replied as follows:—

"Normally when materials are drawn on to the shop floor they come under the category 'work in progress' and if there is continuous work that is going on, the accretion to work in progress balances from year to year. Therefore, the products—that total finished product would give the correct value of the total product. But it so happens sometimes, as has happened, in the case of 1968-69, there is a decrease of 'work in progress' it so happens just before March some material might have come in and they have to be taken on to the shop floor and taken to the 'work in progress'. So that is the explanation, it is a normal feature that has to be accepted."

10.59 The Committee note that from the estimates made in September, 1969, it appeared that Heavy Electricals (India) Ltd. expected to break-even in the year 1973-74 at an out put of the value of Rs. 52.19 crores. Only after 3 months i.e. in December, 1969 while preparing the revised estimates for 1969-70 and budget estimates for 1970-71 the Management felt that the profitability study made in September, 1969 would not come up. During evidence it transpired that the Management took further into consideration the factors like Wage Board Award, continued payments to consultants etc. and worked out that the break-even point would now be reached at an output of Rs. 61 crores which was expected to be reached in 1973-74.

The Committee are of the view that the Management should have made the profitability studies on realistic basis. The Committee desire that the Management and Government should spare no efforts to ensure that the break-even level of production of Rs. 61 crores is reached by 1973-74.

E. Internal Audit

10.60 The Internal Audit Department of the organisation has been concentrating mostly on routine checking and in the opinion of the Company Auditors the audit coverage by Internal Audit, particularly in respect of some of the essential aspects of the Company's transactions, was found to be inadequate. The Company's Auditors suggested that the Internal Audit should give special attention to:—

(i) Detailed audit of Company's cost records.

(ii) Verification and valuation of Company's finished stocks and works-in-progress.

(iii) Test Audit of purchase transactions so as to ensure that the Company's purchase policies and procedure are duly adhered to in respect of all purchases made by the Company.

(iv) Verification of scrap account.

(v) Audit of claims recoverable account.

(vi) Payments made to or provision for expenses and service charges to Technical Consultants.

10.61 The Management intimated to Audit in December, 1969 that the Internal Audit Officer has been asked (August, 1969) to devote special attention to the above items.

10.62 At present there is no procedure of submission of the Internal Audit Report to the Board of Directors or to the Management Committee. The Management intimated (December, 1969) that it is neither customary nor considered necessary to submit the Internal Audit Report to the Board.

10.63 The Ministry informed Audit (May, 1970) that "In line with the latest recommendation of Bureau of Public Enterprises, the Internal Audit Report will, in future, be processed by the Financial Adviser and Chief Accounts Officer and submitted to the Board of Directors through the Chief Executive".

10.64 The Committee asked whether action on the Internal Audit Report was now being taken by the concerned Heads of the Departments. The Committee also enquired what was the periodicity of Internal Audit Reports and how many such reports had been submitted.

10.65 The Management stated in a written reply that no reports of Internal Audit were being submitted to the Board of Directors. The working of Internal Audit had been re-organised according to the orders of the Board of Directors dated 6-5-1970 and had been placed under the control of the Financial Adviser and Chief Accounts Officer. Previously this Branch was functioning under the control of the General Manager. Internal Audit Manual laying down the functions of the Internal Audit had been drawn up. The reports of the Internal Audit are now being put up to the Financial Adviser every quarter, who instructs appropriate action to be taken on important points. With effect from quarter ending December, 1971 a system of including these important points in the Quarterly Financial Review has been introduced, which is submitted to the Board of Directors and the Government.

10.66 These Quarterly Reports are being put up to the Financial Adviser, regularly for the last two years.

10.67. The Committee are surprised to note that the Internal Audit Department of Heavy Electricals (India) Ltd. had not been functioning effectively and did not care to cover even some of the essential aspects of the Company's transactions. The Committee have been informed that the working of the Internal Audit of the Company has been reorganised and placed under the control of the Financial Adviser and Chief Accounts Officer with effect from 1970 to whom quarterly Internal Audit Reports are being submitted, and a system of reporting important irregularities to the Board of Directors and Government through the quarterly Financial Review has been introduced.

The Committee would like the Management to pay earnest attention to Audit Paragraphs particularly those dealing with procedural lapses, so as to take remedial action without delay and obviate recurrence of such lapses.

XI

ORGANISATION

A. Board of Directors

11.1 Heavy Electricals (India) Ltd., was incorporated on 29th August, 1956 under the Indian Companies Act, 1956. The business of the Company is managed by a Board of Directors presided over by the Chairman/Managing Director.

As laid down in Article 69 of the Article of Association of the Company, the number of Directors of the Company shall not be less than two and not more than fifteen until otherwise determined by the Company in a general meeting.

11.2 The Directors (including the Chairman) are appointed by the President of India in accordance with the provisions of Article 70(i) of the Articles of Association of Heavy Electricals (India) Ltd.

11.3 The Composition of the Board of Directors as reconstituted with effect from the 1st October, 1971 is as follows :—

1 Shri O.S. Murthy	Chairman
2. Shri T.V. Parthasarathy	Managing Director
3. Shri Y. Krishan	Director
4. Shri N.J. Kamath	Director
5. Shri A.K. Ghose	Director

General Powers of the Board of Directors

11.4 The Board of Directors have the following general powers under article 71 of the Articles of Association of the Company :—

(i) Subject to the provision of the Companies Act, and the directions, if any, issued by the President from time to time, the Board of Directors of the Company shall be entitled to exercise all such powers, and to do all such acts and things, as the Company is authorised to exercise and do:

Provided that the Board shall not exercise any power or do any act or thing which is directed or required, whether by this or any other Act or by the Memorandum or Articles of the Company or otherwise, to be exercised or done by the Company in general meeting:

Provided further that in exercising any such power or doing any such act of thing, the Board shall be subject to the provisions contained in that behalf in this or any other Act, or in the Memorandum or Articles of the Company or in any regulation not inconsistent therewith and duly made thereunder, including regulations made by the Company in general meeting.

(2) No regulation made by the Company in general meeting shall invalidate any prior act of the Board, which would have been validated if that regulation had not been made.

In addition to the above mentioned general powers, Board of Directors will have the following specific powers that is to say powers :—

(1) to purchase, take on lease or otherwise acquire for the Company, property, rights or privileges which the Company is authorised to acquire at such price and generally on such terms and conditions as they think fit.

(i) To authorise, without reference to Government, the undertaking of works of a capital nature where Detailed Project Reports have been prepared with estimates of different component parts of the Project and where such Project Reports have been approved by Government, and to invite, and accept tenders relating to works included in the approved Detailed Project Report, including variations, if any, in the approved estimates, provided such variations are not more than 10% for any particular component part and do not substantially change the scope of the Project.

(ii) To authorise the undertakings of works of a capital nature, not covered by clause (i) above, if required to be taken up in advance of the preparation of a detailed Project Report or otherwise as individual works, subject to the condition that all cases involving a capital expenditure exceeding Rs. 50 lakhs shall be referred to the President for his approval before authorisation.

(2) to pay for any property, rights or privileges acquired by or services rendered to the Company either wholly or partially in cash or in shares, bonds, debentures or other securities of the Company and any such shares may be issued either as fully paid up or with such amount credited as paid up thereon as may be agreed upon; and any such bond, debentures or other securities may be either specifically charged upto all or any part of the property of the Company and its uncalled capital or not so charged ;

(3) to secure the fulfilment of any contract or engagements entered into by the Company by mortgage or charge of all or any of the property of the Company and its uncalled capital for the time being or in such other manner as they may think fit;

(4) to create posts irrespective of pay but other than those against which appointments are to be made by the President and to appoint and at their discretion, remove or suspend such managers, financial advisers and chief accounts officers, secretaries, officers, clerks, agents and servants, for permanent, temporary or special services, as they may from time to time, think fit, and to determine their powers and duties and to require securities in such instances and to such amount as they think fit. Provided that no appointment in the scale of Rs. 2500—3000 and above of persons who have

already attained the age of 58 years from public or private sector, shall be made without the prior approval of the President;

(5) to appoint any person or persons (whether incorporated or not) to accept and hold in trust for the Company, any property belonging to the Company or in which it is interested or for any other purposes, and to execute and do all such deeds and things as may be requisite in relation to any such trust, and to provide for the remuneration of such trustee or trustees;

(6) to institute, conduct, defend, compound or abandon any legal proceedings by or against the Company or its officers, or otherwise concerning the affairs of the company, and also to compound and allow time for payment or satisfaction of any claims or demands by or against the company;

(7) to refer any claims or demands by or against the Company to arbitration and observe and perform the awards;

(8) to make and give receipt, release, and other discharges for money payable to the Company, and for the claims and demands of the Company;

(9) to determine who shall be entitled to sign on the Company's behalf, bills, notes, receipts, acceptances, endorsements, cheques, releases, contracts and documents;

(10) from time to time to provide for the management of the affairs of the Company outside Bhopal in such manner as they think fit, and in particular to appoint any person to be the attorneys or agents of the Company with such powers (including power to sub-delegate) and upon such terms as may be thought fit;

(11) to invest in the Reserve Bank of India or in such securities as may be approved by the President and deal with any of the moneys of the Company upon such investments authorised by the Memorandum of Association of the Company (not being shares in this Company) and in such manner as they think fit, and from time to time to vary or realise such investments;

(12) subject to the approval of the President, to give to any person employed by the Company a commission on the profits of any particular business transaction, or a share in the general profits of the Company, and such commission or share of profits shall be treated as part of the working expenses of the Company;

(13) from time to time to make, vary and repeal byelaws for the regulation of the business of the Company, its officers and servants;

(14) to give, award or allow any bonus, pension, gratuity or compensation to any employee of the Company, or his widow, children or dependents, that may appear to the Directors just or proper, whether such employee, his widow, children or dependents have or have not a legal claim upon the Company;

(15) before declaring any dividend and subject to the approval of the President, to set aside such portion of the profits of the Company as they may think fit, to form a fund to provide for such pensions, gratuities or compensations or to create any provident or benefit fund in such manner as the Directors may deem fit;

(16) from time to time and at any time to establish any Local Board for managing any of the affairs of the Company in any specified locality in India or out of India, and to appoint any person to be members of such Local Board and to fix their remuneration; and from time to time and at any time to delegate to any person so appointed any of the powers, authorities and discretion for the time being vested in the Directors other than their power to make call; and to authorise the members for the time being of any such Local Board or any of them, to fill up any vacancies therein and to act notwithstanding vacancies, and any such appointment or delegation may be made in such terms, and subject to such conditions as the Directors may think fit, and the Directors may at any time remove any person so appointed and may annul or vary any such delegation;

(17) to enter into all such negotiations and contracts and rescind and vary all such contracts, and execute and do all such acts, deeds, and things in the name and on behalf of the Company as they may consider expedient for or in relation to any of the matters aforesaid or otherwise for the purposes of the Company; and

(18) Subject to the restrictions laid down in Sec. 292 of the Companies Act 1956, to sub-delegate all or any of the powers, authorities and discretion for the time being vested in them, subject however, to the ultimate control and authority being retained by them.

11.5. Under article 85 of the Articles of Association, the Directors may, subject to the provisions of Sections 292 and 297 of the Companies Act, delegate any of the powers to a Committee consisting of such member or members of their body as they think fit and may, from time to time, revoke such delegation. Any Committee so formed shall, in the exercise of the powers so delegated, conform to any regulations that may be imposed on it by the Directors. The proceedings of such a Committee shall be placed before the Board of Directors at its next meeting.

B. Organisational Set-up

11.6. A Board of Directors presided over by the Chairman manages the business of the Heavy Electricals (India) Ltd. The Company has, at present a part-time Chairman and a full time Managing Director.

11.7. The Managing Director is the Chief Executive of the Company. The responsibility in the conduct of business falls on the Chief Executive *i.e.* the Managing Director.

11.8. The administration immediately below the Managing Director consists of Heads of Departments *i.e.* Chief Engineer, Works Manager, Commercial Manager, Financial Adviser & Chief Accounts Officer, Personnel Manager and Secretary.

11.9. The organisation for the factory departments *i.e.* Engineering, Manufacturing, Commercial had been divided on functional basis so far. The co-ordination between the functions like sales, design and manufacturing under the respective Heads of the Departments took place at General Manager's level.

11.10. This organisational set up has been replaced, on an experimental basis, by a Divisional organisation where main functions of sales, engineering and manufacturing for certain product groups are now coordinated at the Divisional Managers level. Under the divisional set-up defferent products have been grouped into self-contained units on the principle of 'profit centres'. The Divisional Managers report to the respective Heads of departments.

11.11. Heavy Electricals (India) Ltd. is engaged in the manufacture of a diverse range of heavy electrical equipments in their eight main project divisions mentioned below:—

1. Switchgear and Controlgear Division;
2. Transformer Division;
3. Capacitor Division;
4. Traction Motor Division.
5. Industrial Motor Division;
6. Large Motors & Generators Division;
7. Water Turbine Division; and
8. Steam Turbine Division.

The main functions relating to each product *i.e.* the sales, design and manufacture under each Divisional Manager are looked after by Sales Manager, Chief Product Engineer and Superintendent respectively.

11.12. The Management informed that the organisational set up for the factory departments of HEIL *i.e.* engineering, manufacturing and commercial which had been working on functional basis was replaced, on experimental basis, by a divisional organisation where main functions of sales, engineering and manufacturing for certain product groups were being coordinated at Divisional Manager's level. The Committee enquired how far the reorganised system had been successful and what further changes were contemplated in the light of their experience of this experiment. The Management stated in a written reply furnished after the evidence that the divisionalised set-up had helped in bringing about better coordination among the three main technical functions—sales, design and manufacturing. They further stated that in the light of the experience gained, it might be necessary to re-organise the feeder and service division set up.

11.13. The Committee asked if the Management of the Company had studied the organisational set up of any comparable enterprise in India or abroad and if so, how their reorganised system compared with that of the comparable enterprise.

11.14. The Management stated that the functional set-up of organisation was recommended by the Consultants originally on the basis of the structure in their own organisation. In their company also there had been a shift towards a divisional organisation. There was a tendency to decentralise operations. The Management did not study the set up of any comparable enterprise, but the scheme was discussed by them with the Consultants. Who had adopted the divisionalised set-up in their own organisation in the recent years.

11.15. The Committee asked if the Management were satisfied that their organisational set-up was conducive to the attainment of the objectives for which HE(I)L was set up. The Management stated that any organisational set-up should provide for certain flexibility to meet the demands of the situations arising from time to time. They further added that while the present set-up could not be regarded as a permanent and rigid structure, it was felt by the management that, by and large, it did meet the needs of the present conditions.

11.16. The Ministry of Industrial Development stated in this respect in a written reply that the previous functional pattern of organisation did not appear to be conducive to fixing responsibility for achieving output. Apart from fixing the responsibility on Managers for all the activities such as sales, engineering and manufacture relating to their products the organisational pattern on a divisional basis gives the Divisional Managers the feeling of belonging and responsibility for all these activities in respect of the products in their Division.

11.17. The Committee note with satisfaction that the set-up of Heavy Electricals (India) Ltd. as reorganised on divisional basis meets the needs of the present conditions and gives the Divisional Managers a feeling of belonging and responsibility for all the activities in their Divisions and hope that this system would prove to be more conducive than the functional pattern of organisation for achieving greater output. The Committee recommend that the working of the revised organisational set-up should be kept under constant review with a view to effecting improvements as may be necessary.

Recruitment and Promotion Policy

11.18. The Committee on Public Undertakings in their Twelfth Report (1967-68) had pointed out that "accelerated promotions" had been given to both technical and non-technical personnel resulting in discontentment amongst the employees of HE(I)L. The Committee had recommended that the Company's promotion policy should be so framed that there was no room for favoured treatment. The Committee had also recommended that the Rules in this respect be revised so that accelerated promotions were not given without cogent reasons. Asked as to what was the present recruitment and promotion policy of the Company, the Management stated in a written reply that their present recruitment policy was as follows:—

"*Recruitment Policy*

1. As a general rule, vacancies caused by normal wastages and additional requirements are met from existing personnel within the organisation by promoting suitable employees; thereby the vacancies are brought down to the lowest cadres and the intake from outside is thus restricted to certain fixed levels. In the case of non-availability of suitable personnel within the Organisation, recruitment from open market is resorted to as explained below:—

2. The principle followed for outside recruitment is in line with the relevant provisions in the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959 and the Ministry of Industrial Development, Internal Trade & Company Affairs letter No. Pr. C. 14(6)/68 dated 14-8-1968. Accordingly the vacancies in posts of technical and scientific nature carrying a basic pay of Rs. 210/- or more are notified to the Central Employment Exchange, New Delhi and other posts carrying basic pay less than Rs. 210/- as also non-technical and non-scientific posts carrying basic salary upto Rs. 500/- p.m. are notified to the Local Employment Exchange.

3. Where the Local Employment Exchange is unable to sponsor suitable candidates and the non-availability certificate is issued by them, the posts are advertised in the press within the State. In the case of higher posts where the Central Employment Exchange (DGET), New Delhi is unable to sponsor suitable candidates, they issue non-availability certificate and the posts are then advertised on All India basis. In the case of technical/managerial posts, the Scientists Pool (CSIR) as well as BPE (Ministry of Finance) are also requested to sponsor suitable candidates.

4. Candidates sponsored in the above manner are interviewed by duly constituted Selection Committees set up by the Company which invariably include a representative of the State Government. At levels of posts carrying a pay scale of Rs. 450—1075/- and above, the Selection Board is presided over by a retired member of the UPSC and includes another senior technical member from outside, a member of the MP State Public Service Commission and is assisted by technical advisors from the Company."

11.19. Regarding their promotion policy, the Heavy Electricals (India) Ltd. have stated as follows:—

"Promotion Rules for all categories of employees have been framed and incorporated in the Service Rules/Standing Orders of the Company. The promotion Rules were modelled on the basis of draft rules circulated by the Ministry of Industrial Development, Government of India. The promotions are based upon the vacancies in the cadre and on the basis of actual requirement. However, in certain cases promotions have been made to satisfy the career development ambitions of some categories of employees, where employees have stayed in a grade for considerable periods and are not only eligible but have also been found suitable by duly constituted Selection Committees for higher posts. A review of the promotion policy has been undertaken and detailed promotion rules in respect of officers cadres are at present under the consideration of the Board of Directors. The Management has also appointed a Committee of Senior Officers of the Company to review the promotion policy of employees below officer's level, within the framework of the existing Service Rules/Standing Orders."

11.20. In reply to another question the Management stated in a written reply that no accelerated promotions were given to technical or non-technical staff. A minimum period of service in the lower grade was insisted upon before a person was considered eligible for promotion to the higher grade. The minimum qualifying service for promotion to the next higher grade was 2 years in the case of some categories and three years in some others.

11.21. They further stated that promotions were based on merit and selection was made through Departmental Promotion Committees and not on the principle of seniority alone. Hence promotions were neither 'inturn' nor "out of turn".

11.22. The Management informed that in certain cases promotions had to be made to satisfy the career ambition of employees who had stayed in a grade for a considerable period and were qualified for higher posts. The Committee enquired what special provisions had been made in the promotion rules to create avenues for promotions for different grades of employees with particular reference to satisfy the career ambitions of meritorious employees. The Committee further asked whether any representations were received in cases where promotees superseded some senior employees and if so, how such representations were disposed of.

11.23 The Management stated in a written reply that Promotions were not based solely on the seniority but on merit—seniorіry being one of the factors considered. Hence for meritorious employees better opportunities for promotions were in-built in the promotion rules and policy. However, the problem of career advancement for the large majority as the organisation became old got highlighted due to the following factors:—

(*i*) That recruitment was done in large batches more or less at the same time;

(*ii*) That the qualifications/training and age group of the employees was about the same.

(*iii*) That the development of skills or experience was equal.

11.24. The problem of promotion of employees had therefore, become difficult as the vacancies in higher cadre were few, whereas the number of eligible persons who were also suitable was disproportionately large.

11.25. The Management further stated in this respect that in order to clear the stagnation of the employees in a scale for want of promotion opportunities, posts have sometimes to be upgraded to satisfy the career development ambitions of some categories of employees, although no such consideration is generally given to individual cases.

11.26. They also stated in this respect as follows:—

"The promotion rules laid down under the standing Orders and the Service Rules provide promotions to be made for filling up of vacancies. No special provisions have been made so far in promotion rules to satisfy the career ambition of meritorious empployees. However, since the system of promotion is based on merits selection and not on serniority the meritorious employees get quicker chances of promotion as compared to the average employees by reason of their outstanding performance."

11.27. The Management further mentioned that the scheme and rules for promotion contemplate selection based on merit and performance seniority being only one of the factors. In a sense, therefore, it can be said that all promotions have gone to meritorious employees. But promotions have generally been against accepted vacancies and not merely for the sake of providing career advancement to a few exclusively picked meritorious employees.

11.28. The problem in fact is of the average employees staying long in a grade as posts at higher levels are limited. Posts have had to be upgraded or monetary incentives provided to remedy this situation for some categories of employees, such as Graduate Engineers/Assistant Foreman Grade-I, B. Grade Artisans, L.D.Cs. etc.

Total number of promotions in all the categories that they have taken place during the last 3 years are as under:—

1968-69	939
1969-70	1,690
1970-71	1,781

11.29. The number of posts upgraded/monetary incentives provided to employees during the last 3 years are as under:—

	Years		
	1968-69	1969-70	1970-71
No. of posts upgraded	55	323	651
No. of employees provided monetary incentives by way of special pay		232	66

11.30. Explaining the basis on which the promotions were made on the basis of merit and not on seniority, except in case of LDC to UDC. Whenever selections were held, left overs of the earlier selections were also considered and promoted on merit. Even the career development promotions were based on merit.

11.31. Thus employees who stayed long in a grade did not get promotions/incentives merely on the basis of seniority but such benefits were merit based.

11.32. Since promotions were not based on seniority, the concept of supersessions was not applicable in the scheme of their promotion. Hence it was not possible to furnish the information about the number of cases of supersessions. According to Audit, a Memorandum laying down the appointment and promotion policy to be followed in regard to officers was put up to the Board of Directors in the 107th meeting held on 21-1-1969 but that item was referred by the Board of Directors to the sub-Committee in the 121st meeting held on 16-3-1971 after a period of more than two years and the matter is still pending finalisation.

11.33. However, in the case of promotions from L.D.Cs to U.D.Cs, where promotions were made by seniority-cum-suitability basis, there had been 14 cases of supresessions during the last 3 years.

11.34. Since the concept of supersessions was not applicable in the scheme of their promotion, which were merit based, representations of supersessions had no relevance, though they were received and dealt with accordingly.

11.35. The Committee understand that a Memorandum laying down the appointment and promotion policy to be followed in regard to officers was put up to the Board of Directors in the 107th meeting held on 21-1-1969 but that item was referred by the Board of Directors to the sub-Committee in the 121st meeting held on 16-3-1971 *i.e.* after a period of more than two years and that the matter is still pending finalisation. The Committee feel that an important matter affecting appointment and promotion policies should have been handled with promptitude.

11.36. The Committee have made horizontal studies on Personnel Policies and Labour Management Relation in Public Undertakings. In this connection, the Committee had occasion to have the evidence of Chairman/Managing Director of Heavy Electricals Limited, Bhopal. Based on the evidence and other relevant information available to them, the Committee have made concrete suggestions in the matter of recruitment, promotion, confirmation, training, redressal of grievances of workmen etc. The Committee have no doubt that if these recommendations are implemented in letter and spirit, the relations between the management and the employees are bound to improve.

C. Staff Strength

11.37. The Heavy Electricals (India) Ltd. was bifurcated on and from 17th November, 1964 and a new Company under the name and style of Bharat Heavy Electricals Ltd., New Delhi was formed to take over the management of the 3 units of Heavy Electricals (India) Ltd. at Hardwar, Hyderabad and Tiruchirapalli.

11.38. The total permanent staff on the pay rolls of HEIL as on 31st March, 1966 was as given below:—

(*a*) Engineers	840
(*b*) Technicians (including supervisers, skilled/semi-skilled Artisans etc.)	7,159
(*c*) Non-technical (Industrial unskilled workers) . .	1,222
(*d*) Administrative and others (including security, Medical, canteen and store-keeping staff)	4,006
TOTAL .	13,227

11.39. The total regular staff on the pay rolls of the Company as on 31st March, 1971 alongwith the comparative position as on 31st March, 1970 is indicated below:—

Description	As on 31-3-1971	31-3-1970
A. *Factory Departments :*		
1. Senior Supervisory (Officers in the scale of Rs. 775-1,375/- and above	311	291
2. Junior Supervisory (other and including foremen, assistant foremen down to chargehands and equivalents) . .	1,972	1,884
3. Skilled, semi-skilled artisans and draughtsmen . .	7,503	7,174
4. Unskilled workers on Production and Maintenance work .	1,968	2,080
5. Production Clerks, Cost Accounting and Stores Keeping staff, canteen workers etc.	1,573	1,621
6. Security Staff .	432	418
B. *Non-Factory Departments :*		
1. Staff in Administrative Departments like Personnel, Accounts (Finance), Secretariat etc.	887	867
2. Staff in Township (Civil and Electrical Maintenance) and Medical	1,199	1,169
TOTAL . .	15,845	15,504

11.40. It is clear from the figures given above that there has been about 19.8% increase in the staff strength of the Company during the last 6 years.

D. Incentive Scheme

11.41. The Committee enquired whether the compay had formulated any incentive scheme for its staff and if so, what were its salient features. The Management stated in a written reply that the scheme was introduced in March, 1965 and it was progressively extended to 82 Sections in 20 different divisions in the factory covering a total number of 6657 workers.

"Under the scheme, Allowed times are set for the various operations for an operator working at a normal pace. The time taken by the operators for the operations are recorded on the job cards and efficiency on each complete job is measured as follows:—

$$\text{Efficiency percentage} = \frac{\text{Allowed time X 100}}{\text{Actual time taken}}\text{''.}$$

11.42. The total earnings of the operator under the present scheme comprise of:—

(*i*) *Guaranteed Time Rate.*—Guaranteed time rate of the operator is paid on monthly basis. Incentive Bonus earned will be in addition to his guaranteed time rate.

(*ii*) *Craft Bonus.*—The Operator who has not reached the 6th year rate in his present grade will be paid a craft bonus to bring his earnings upto the craft rate, which is the rate at the 6th year of the scale. This will be enabling an operator to achieve craft rate by demonstrating his proficiency on the job, irrespective of his length of service. The craft bonus is paid on the hours worked on any job in which the efficiency is 50% or above and remains constant for efficiencies above 50%.

(*iii*) *Efficiency Bonus.*—In order to encourage the operator to increase his efficiency above 50%, an efficiency bonus is paid in addition to the craft bonus. The efficiency bonus is related to the efficiency achieved at 50% and above and correspondingly increases with increase in efficiency.

(*iv*) *Participation.*—The scheme is applied to direct productive and ancillary workers. Direct productive workers are such workers who are engaged in operations for which allowed times have been established. Ancillary workers are such workers whose contribution to production is essential but norms of performance cannot be set accurately at present.

(*v*) *Production Drive Bonus* 1971-72.—There is a Production Bonus Scheme which is operative from Ist October, 1971 to the end of the 31st March, 1972, the salient features of which are as under:—

Achievement of 95% of the annual targetted output or beyond will be considered for awarding the Production Drive Bonus.

Employees who are connected with production activities will participate in this drive.

There will be ceiling of Rs. 100/- for the maximum reward to any individual.

The rewards will be expressed as a percentage of basic salary plus D.A. for the month of March, 1972 and percentage will be between 15% to 25% as given below:—

Percentage of annual target	Rewards as per para 4 of the Circular
95—100	15%
101	17%
102	19%
103	21%
104	23%
105	25%

11.43. All types of leave upto 10 days during the entire period of production drive may be allowed without any reduction of reward. Thereafter deductions will be made. There will be *pro-rata* reduction for overtime work also.

11.44. In addition there is a purchase drive bonus scheme which follow mainly the Production Bonus Scheme in its features.

Such a Production Drive Bonus Scheme existed also during the years 1969-70 and 1970-71."

Labour Indiscipline

11.45. The Management informed in 1970 that the overall disciplinary position in the factory had been far from satisfactory and that the individual discipline was at a very low ebb. The Committee asked what steps were taken by the Management to improve the individual discipline indicated that the Management had failed to provide responsive leadership to the workers and create motivation among them for better output.

11.46. The Management stated in a written reply that discipline suffered due to successive agitations and various types of coercive methods adopted by a multiplicity of unions in the earlier years.

11.47. The Management intimated the following measures which they took to improve discipline:—

(*i*) Improving control and supervision of work by the supervisory staff. Managing Director has himself held a series of meetings with supervisory staff and officers to impress upon them the need for maintaining strict discipline and assuring them of full support of the management in this task.

(*ii*) Direct discussion of worker's problems and seeking their co-operation in Joint Production Committees at divisional and Plant levels and imparting to the workers a sense of participation and belonging.

(*iii*) Quick redressal of workers' grievances through Grievance Committees.

(*iv*) Associating worker's representatives with management in various Committees of administration such as those for Hospital, for Canteens and for the Township Housing etc.

(*v*) Arranging quarterly meetings of worker's representatives with the MD and all HODs of the Company for providing a forum for free discussion of any important issues including those concerning discipline.

(*vi*) Strict checking at the factory and block gates by the Security staff.

(*vii*) Gradual reduction and denial of "All Passes" to members of unrecognised unions to restrict loitering all over the factory. Restricting the number of such passes even for the Representative Union.

(*viii*) Firm disciplinary action against those guilty of indiscipline. Eight workers have been terminated during 1970-71 on such charges. Such deterrant action has had a salutory effect.

(*ix*) Management courses for various levels of officers and supervisors have been conducted to give them a better working knowledge of their functions and management techniques to enable them to do their work relating to their respective levels more effectively. These courses have proved useful in giving the concerned staff a better knowledge of their functions as a part of management.

11.48. The Management did not agree that they failed to provide responsive leadership and create motivation for better output. They stated that in fact, the Management had been doing all it could to create motivation among the workers by personal contact, the Incentive Scheme and the provision of avenues of promotions etc. Some of the measures adopted for securing better response and co-operation from the employees are listed above. The Main reason for labour trouble had been the rivalry not only between various unions but also within the unions themselves.

11.49. The Committee enquired if any procedure had been adopted to redress grievances of the workers and whether labour unions had accepted that procedure.

11.50. The Management stated in a written reply that a grievance procedure based on the lines of model grievance procedure laid down under the Code of Disciplin had been adopted in the Undertaking for the redressal of the grievances of the employees, by an agreement with the Representative Union since 1963.

11.51. They further stated that the grievance procedure had been established by an agreement with the eRpresentative Union under the Madhya Pradesh Industrial Relations Act and is accepted by all employees.

11.52. The Management also informed that the procedure provided for quick redressal of grievances and in the meetings of the Grievance Committees the worker's representatives had a chance of free expression of their viewpoint. The procedure helped in settling most issues to the satisfaction of the employees and in cases where they were not satisfied they got a better appreciation of the Management's point of view. The functioning of the Grievance Committees helped to create better mutual understanding and was useful in encouraging Co-operation.

11.53. The Committee note that the grievance procedure based on the lines of Model Grievance Procedure laid down under the Code of Discipline is being followed by the HEL for the redressal of grievances of the employees.

The Committee would suggest that Supervisors/Managers should also be given training to handle the grievances and to dispose them of effectively and sufficient delegation of authority should be given to them to deal with the grievances promptly.

XII

CONCLUSION

12.1. The Heavy Electricals (India) Limited was formed on 29th August, 1956 with the collaboration of M/s. Associated Electrical Industries of U.K. for the manufacture of the Heavy Electrical Equipment such as hydraulic turbines, switchgears, transformers, controlgears, static capacitors etc. The three factories *viz.* (1) Heavy Electricals Plant at Ranipur, Hardwar, (2) Heavy Power Equipment Plant at Ramachandrapuram, Hyderabad and (3) High Pressure Boiler Plant at Tiruchirapalli, Tamilnadu; which were started some time in 1962-63 were also being managed by the Company till November, 1964. Due to increase in the activities of the Heavy Electricals (India) Limited at Bhopal, these Units were transferred with effect from 17th November, 1964 to a newly formed Company *viz* Bharat Heavy Electricals Limited, New Delhi. The Heavy Electricals (India) Ltd. is wholly owned by the Central Government and has an authorised capital of Rs. 50 crores.

12.2. The Committee note that out of 30 sets of designs/drawings obtained under the main Agreement from the Associated Electrical Industries, the Undertaking have been able to adapt 15 of them for manufacture of turbines indigenously.

12.3. The Committee suggest that Heavy Electricals (India) Ltd. should make full use of design drawings already available under the Main Agreement from the Associated Electric Industries in order to adapt and improve upon them to suit the requirements of new hydraulic turbines/equipment to be manufactured by the undertaking. The Committee consider that wherever it is not found feasible after careful consideration to make use of the drawing designs available with the Associated Electrical Industries under the Main Agreement then a considered proposal to purchase the drawing design from the English Electric Company may be brought forward before the Board of Directors and their prior approval taken before incurring additional expenditure.

12.4. The Committee regret to note that delay of about two years occurred in sanctioning the Revised Project Estimates of the undertaking. The Committee recommend that Government should lay down clear guidelines in the matter and that the procedure for processing the revised estimates should be streamlined with a view to finalising them and communicating the orders without loss of time. The Committee need hardly point out that while examining such upward revision of estimtes, Government should go into its impact on the economics of production.

12.5. Taking into account the likely demand for ten 120 MW sets of steam turbines in the country during the period of 5 years *i.e.* from 1966-67 to 1970-71 as indicated by the Government of India and Planning Commission, the Government of India sanctioned a "steam Turbine Expansion

Project" in 1963 at an estimated cost of Rs. 997.87 lakhs (revised to Rs. 1,465 lakhs in March, 1968) with an output of a maximum of seven sets at the rate aggregating 600 MW per annum. The fisrt set of 120 MW turbine was imported and delivered straight away to the customer by 31st March, 1969. The order for other 4 sets were received between March, 1968 and August, 1969. The Committee are surprised that the orders for the manufacture and supply of the Steam Turbines were not received by the Heavy Electricals (India) Ltd. in accordance with the indications given by the Planning Commission and the Government of India in 1963. The Committee, therefore, recommend that a relistic demand analysis should always be worked out before embarking on production or an expansion programme.

12.6. The Committee are surprised that on the one hand there is shortage of power in most parts of the country and on the other hand there is lack of firm orders on the Undertaking for manufacture of generators and turbines. The Committee are, therefore, of the opinion that there is urgent need for integrated planning and coordinated execution.

12.7. The Committee find that the "Supplementary Project Report" prepared by the Consultants did not contain any profitability study. This profitability study was made only in March, 1968 *i.e.* after a lapse of a period of about 5 years. The Committee are distressed to note that completion of the project has lagged behind and delivery schedule drawn up by the Management even for those sets for which firm orders were received, had not been kept up. The Committee recommend that the management of Heavy Electricals (India) Ltd. should take advantage of modern management techniques like Programme Evaluation Review Technique (PERT) to guard against the usual inadequacies and pit falls in the matter of ensuring adherence to delivery schedules.

12.8. The Committee note that according to the indications given by the Management to the Government of India in August, 1969 the value of materials and components ordered till then for manufacture of steam turbines was about Rs. 17 crores. The Committee are, therefore, of the view that Management of Heavy Electricals (India) Ltd. should not have ordered for major components so much in advance of firm orders and allowed its scarse resources to be so blocked leading to avoidable burden on account of payment of interest. The Committee recommend that infuture the Management of Heavy Electricals (India) Ltd. should so plan its development of pre-production that the facilities created for the purpose do not remain unutilised and their capital does not remain stuck up for long periods. The Committee are of the view that advance planning for acquiring components and parts would have served larger interests of the country had there been integrated planning in related spheres.

12.9. The Committee note that the original Detailed Project Report as submitted by the Consultants in the year 1956 had envisaged an annual output of Rs. 12.5 crores on single shift basis. In April, 1966, the Management estimated that on attainment of the full rated capacity the value of production would be Rs. 33.65 crores. No time bound programmes for gradually achieving the capacity from year to year was drawn up nor was any indication as to the number of years required for achieving full planned output made. Only in 1967-68 the Company indicated the installed capacity for the first time. It is unfortunate that the Management of Heavy Electricals (India) Ltd. had been fixing targets of production much below the installed capacity. The performance of actual production has left wide gaps because the actual production fell short of even the targets fixed by the Management itself.

12.10. The Committee recommend that reasons for fixing targets below the installed capacity and the actual production being less than even those targets should be probed into by Government to ensure better performance in future.

12.11. The Committee were informed that the main bottleneck in ensuring timely manufacture of turbines was delay on the part of foreign and indigenous suppliers in supplying castings and forgings and special types of bearings required for the manufacture of turbines or supply of defective castings and forgings which had to be got rectified. The Committee observed that there was lack of foresight and coordination between the various departments and Government sectors which were responsible for such delayed deliveries. The Committee, therefore, recommand that Government should provide all assistance to indigenous suppliers to develop their capacity to manufacture such important parts like forgings, castings and even bearings which are essential products in the manufacture of power equipment so vital for the achievement of the Power Plan. The Committee also recommend that Government may consider the feasibility of obtaining castings and forgings of required specifications from other public undertakings like the H.E.C.

12.12. The Committee find that the completion of 6 Hydro Projects and 3 Thermal Projects in the country has either been delayed or would be delayed due to non-adherence of delivery schedules by the Heavy Electricals (India) Ltd. and consequently generation of nearly 1425 MW of power has been shifted back. The Committee regret to note that the latest revised delivery schedules indicated in June, 1971 is likely to slipback further in some cases. It need hardly be pointed out that such delays have affected the growth of industrial production and investment both in the public and private sectors besides having other implications, like putting the Company to a financial loss due to payments of penalities to the customers under the penalty clause, confidence of the customer being shaken by not getting timely supply of the equipment affecting the order position. The Committee, therefore, emphasise the need for advance planning and closer coordination between the manufacturing units and Electricity authorities and recommend that the Government and the Board of Directors of Heavy Electricals (India) Ltd. should keep a special watch on the progress made by the Company from month to month, identify the causes of delay and take remedial measures without delay.

12.13. The Committee also recommend that since Heavy Electricals (India) Ltd. is engaged in manufacturing heavy equipment for the power generating projects under the administrative control of Ministry of Irrigation and Power, Government may consider the advisability of transferring the administrative control of the Undertaking from the Ministry of Industrial Development to the Ministry of Irrigation and Power which is responsible for generation, transmission and development of power in the country.

12.14. The Committee find that expenditure incurred on 'rectification and replacement' of defective works has increased from Rs. 3.25 lakhs in 1966-67 to Rs. 5.79 lakhs in 1970-71, a rise of about 76 per cent. The Committee find that the castings and forgings are accepted by Heavy Electricals (India) Ltd. on "visual inspections" only and when the top surface of it is scrapped, it is only then that some times defects came to notice. The Committee recommend that the possibility of use of these modern devices like X-Ray machines and ultra Sonic Detectors for detection of defects in the castings and forgings should be explored further in consultation with other public undertakings who use castings and forgings.

12.15. The Committee note that percentage of 'idle time' in Heavy Electricals (India) Ltd. to total direct wages as booked had been ranging between 16.0 to 19.8. Absence of work and material accounted for roughly 73% of the total idle time. The Committee find that idle time is occasioned in specific areas due to imbalance in the work-flow. The Committee recommend that work scheduling should be planned on a realistic basis and planning and product control machinery in the Heavy Electricals (India) Ltd. should be geared up so as to minimise idletime. It is hard to understand much less justify that an undertaking like Heavy Electricals (India) Ltd. which is unable to conform to its delivery schedules should have idle time as high as 20 per cent.

12.16 The Committee regret to note that despite the observations of the Bureau of Public Enterprises about the utility of introduction of the composite machine hour rate, Heavy Electricals (India) Ltd. have not thought of introducing machine hour utilisation system. This system should be introduced without further loss of time because it will enable the management to gauge the extent of under utilisation of machines and explore the possibility of undertakings jobs for others. Government should take an early decision on whether or not Heavy Electricals (India) Ltd. should go in for a computer.

12.17. The Committee note that the ratio of workers per junior supervisor was about 18.7. The present ratio at the shop floor is stated to be 11.2 workers per junior supervisor taking into account junior officers as part of junior supervisory staff to workers. The Committee also note that the ratio of workers to "first line supervisors" was 14.4 : 1.

The Committee recommend that Government/Management may consider fixing suitable and realistic norms for supervisors workers ratio on the shop floor at different levels, if necessary with the assistance of Management experts and issue instructions for adhering to such norms.

12.18. The Committee note that as on 30th September, 1971, the Heavy Electricals (India) Ltd. had orders of the value of Rs. 222.45 crores and that the delivery was due during the next five years. Most of the customers who place orders with Heavy Electricals (India) Ltd. are organisations in public sector. The Committee do not, therefore, see why it should be difficult for the Management of the Company and Government to embark upon an integrated and detailed planning to ensure that Heavy Electricals (India) Ltd. have, at all times, orders for execution from 3 to 5 years which would in turn ensure efficient production in the undertaking.

12.19. The Committee also strongly recommend that all out efforts should be made both by the Management and Government to attract more orders from other countries and thereby increase exports.

12.20. The Committee recommend that HE(I)L should evolve their pricing policy in such a way that prices fixed by negotiations with the customer are equitable and as far as possible are not more than the landed cost of comparable imported equipment following more or less similar design philosophy. The Committee recommand that some guidelines should be issued to the Commercial Department to ensure that the selling prices of products in the competitive range are not unduly below the cost of production. The Committee would stress the need for improving efficiency, increasing output and effecting economy so that the prices charged by Heavy Electricals for various products compare favourably with the internal price obtaining in exporting countries in respect of particular product.

12.21. As there is considerable scope for its products in developing countries, the Committee recommend that the Company should explore all possible means of expanding its export trade for their standard products in order to utilise full capacity of the Plant.

12.22. The Committee find that there was no specific provision in the Project Report for activising self-reliance by developing indigenous substitution for imported raw materials and components. The Committee note that though a separate cell was set up for import substitution by the Company with effect from the 27th November, 1965, the performance of the Company during the last five years *i.e.* from 1966-67 to 1970-71 towards import substution had been rather disappointing. While the Company has been fixing increasing targets for import substitution the percentage of achievement has actually shown downward trend. Urgent steps should also be taken to standardise and improve the quality of the products of Indian Manufacturers so that these are readily accepted by the customers. The Committee suggest that assistance of Research Institutions in the country should be taken in developing indigenous substitution for items of raw materials and components in order to achieve self-reliance.

The Committee also recommend that Government should chalk out a time-bound programme for achieving indigenous production of items which are being imported at present.

12.23. The Committee recommend that endeavours should be made to place the existing Cost Investigation System on a more systamatic and scientific footing not only in respect of the established products of the Company but also each item of manufacture.

12.24. The Committee find that the inventory in the Company was very heavy due to lack of effective coordination between different indentors of the Company resulting in repeated indents for the same materials. The Committee are perplexed at the paradoxical position that while on the one hand the Company had heavy inventory and surplus store on the other hand there was delay in the manufacture for want of raw materials.

12.25. The Committee note that while the supply of 1500 MT CRGO Steel Grade 46 ordered with the foreign firms was under execution, the Production Planning Department (Transformer Division) of the Company found that the stocks already with the Company were in excess of their immediate requirements. The Committee also note that 300 MT of this steel was sold on 1st May, 1969 to M/s Guest Keen Williams of Bombay who were experiencing difficulty in the procurement of that steel, and this resulted in short realisation amounting to Rs. 3,64,350. Subsequently the Company procured 650 tonnes of the same Grade CRGO steel at approximately £20 per MT more than the previous price order for which was placed on 14-12-70. The Committee observe that Heavy Electricals (India) Ltd. had not only to pay £13,000 (Rs. 2,34,000) extra for the same grade of steel which they had sold earlier but had also to forego the benefit of import licence to that extent. The Committee are some-what intrigued by the unusual concern shown by the Heavy Electricals in reducing their inventory in this particular scarce material *i.e.* CRGO Steel grade 46 and that too in favour of a private party. If there was an anxiety to reduce the inventory in steel for this particular grade, it would have been better for the Undertaking to exchange it with steel of the requisite quality from another sister Public Undertaking or by disposing it of the to another Public Undertaking. The Committee feel that Government should issue suitable instructions to ensure that transaction of this nature, particularly in scarce and imported raw-materials do not recur.

12.26. The Committee recommend that selling prices for resale of machinery and equipment purchased should be settled in advance to obviate misunderstanding and long drawn out correspondence. The Committee also recommend that every endeavour should be made to improve the real output of the Company.

12.27. The Committee note that from the estimates made in September, 1969, Heavy Electricals (India) Ltd., are expected to break-even in the year 1973-74 at an output of the value of Rs. 52.19 crores. Only after 3 months *i.e.* in December, 1969 while preparing the revised estimates for 1969-70 and budget estimates for 1970-71 the Management felt that the profitability study made in September, 1969 would not come up.

The Committee are of the view that the Management should have made the profitability studies on realistic basis. The Committee desire that the Management and Government should spare no efforts to ensure that the break even level of production of Rs. 61 crores is reached by 1973-74.

12.28. The Committee have no doubt that if their recommendations in the "Report on Personnel Policies and Labour Management Relations in Public Undertakings" are implemented, the relations between the management and the employees are bound to improve.

M. B. RANA,
Chairman,
Committee on Public Undertakings.

NEW DELHI ;
April 26, 1972

Vaisakha 6, 1894 (*S*)

APPENDIX—I

(*Vide* Para 4.6)

Sl. No.	Particulars of the Product	Unit	1967-68						1968-69					
			Installed capacity		Target fixed		Actuals		Installed capacity		Target fixed		Actuals	
			Unit	Value	Unit	Value	Unit	Value	Unit	Value	Unit	Value	Unit	Value
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I.	*Switchgears*													
1.	II K.V. Indoor type B.V.	Nos.	1,500	210	1,200	180.00	755	122.97	1,500	210	400	48.00	450	57.96
2.	II K.V. Isolators type I B 4	,,	150	5	60	2.00	101	4.81	150	5	75	3.00	43	1.69
3.	II K.V. Outdoor type G.P.C.	,,	350	10	150	8.00	57	3.67	350	10	50	2.00	55	3.67
4.	II K. V. Type KIOSK	,,		..	..				..	..	100	16.00	16	4.14
5.	33 K. V. Type Outdoor L. G.	,,	400	160	400	160.00	280	114.53	400	160	110	39.00	181	71.19
6.	66 K. V. Type Outdoor L.G. 3	,,	100	55	100	55.00	80	47.94	100	55	150	75.00	100	65.57
7.	132 K.V. 220 K.V. G.A.6	,,	50	75	8	12.00	2	3.72	50	75	30	45.00	16	27.77
8.	Control Relay Panels	,,	600	55	400	36.00	280	29.51	600	55	400	40.00	296	34.65
9.	Miscellaneous	,,	..	..	..	..	..	..	..	..	..	..	..	0.89
	Sub-Total (I)		3,150	570	2,318	453.00	1,555	327.15	3,150	570	1,315	268.00	1,157	267.53

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
II.	*Controlgear and Panels*													
1.	Industrial control-gear and Panels .	Nos.	400	30	300	9.00	199	13.35	400	30	200	30.00	146	18.74
2.	Traction Control-gear D.C. EMU .	,,	30	55	12	22.00	24 (Part)	19.90	30	55	24	42.00	18+12	40.67
3.	Traction Control-gear A.C. EMU .	,,	50	80	36	56.00	26+9	52.22	50	80	55	85.00	40+7	47.57
4.	Traction Control-gear Diesel B.G. .	,,	80	35	51	21.00	16+10	7.52	80	35	66	28.00	44+6	47.38
5.	Traction Diesel MG										20	8.00		
6.	Traction DC LOCO										2	1.00		
7.	Industrial Rectifiers Set . . .								60	100	60	100.00		
	Sub-Total (II) .		560	200	399	108.00	241+43 (Part)	92.99	620	300	427	294.00	248+25	154.36
III.	*Transformers*													
1.	Power Transformer MVA . . .		3,000	540	1,800	440.00	1300.07	354.06	3,000	540	2,000	400.00	1533.475	337.93
2.	Instrument Transformers . .	Nos.	400	48	150	18.00	225	28.63	400	48	350	45.00	285	39.98
3.	Traction Transformers A.C. HMU	,,	50	58	44	50.00	44	45.54	50	58	49	56.00	85	64.01
4.	Traction Rectifiers A.C. EMU . .	,,	50	55	44	44.00	38	39.55	50		55	52	52.00 30	37.49
5.	Traction Transformers F. LOCO .	,,	100	135	45	58.00	32	41.60	100		135	48	64.00 55	102.85
6.	Reactors and Special Transformers .	,,	..	..	..	..	..	..	..		..	75	25.00 51	24.33
7.	Welding Transformers . .	,,	200	4	110	2.00	30	1.03	200	4	75	25.00	14	0.41

8. Rectifiers Transformers . .	,,	..				..	..	..		..	..	..	..
9. Miscellaneous Transformers . .	,,	..	..	..	..	..	6.10	..	..	..	..	..	6.19
Sub-Total (III) .		3800	840	2193	612.00	1669.07	516.51	3800	840	2574	642.00	2053.475	613.19
IV. *Capacitor kvar* .	.	144000	75	100000	50.00	94007.01	63.14	144000	75	100000	78.00	101113	71.80
V. (i) *Traction Motors*		800											
1. D.C.EMU Motors 133 AY . . .	Nos.	Motors & associated generators	48	31.00	47	29.05	..		96	62.00	55	46.01	
2. D.C. EMU Auxiliary MG-51 . . .	,,	..	12	3.00	12	3.15	..	..	25	6.00	18	.7.62	
3. A.C. EMU Type 253-BX . .	,,	..	136	42.00	146	42.53	800	560	192	62.00	116	72.23	
4. Diesel Loco M/C BG Set . . . }	,,		300	187.00	195	118.66	..	..	312	203.00	310	239.37	
5. Diesel Loco M/Cs MG Set . . }		..	..		..	..		..	150	48.00	80	42.97	
6. D.C. Loco Machines	,,	..	..		..	..		..	..	..	..	..	
7. Industrial Alternators	,,	..	..	..	..	..	..	..	..	12	8.00	..	..
8. Miscellaneous .	,,	..	..	..	..	..	12.71	..	..	..	..	..	10.28
Sub-Total V(i) .		..	..	496	263.00	400	206.10	800	560	787	389.00	579	418.48
9. (ii) Diesel .	Nos.	800 Motors & associated generators	..	50	53.00	30	31.82	..	..	52	53.00	26	86.96

1	2		3	4	5	6	7	8	9	10	11	12	13	14
10.	Diesel Loco Auxi. Generator type AG 5(BG) . .		,,	..	100	10.00	72	7.94			114	12.00	48	5.21
11.	Diesel Loco Main Generator type AG 5 (BG) . .		,,	..	1	1.00			270	234	10	9.00	..	..
12.	Diesel Auxi. Gen. Type 2512 AZ/AG 32(MG) . .		,,	..	1	0.10	..	..	..	..	..	..	..	..
	SUB-TOTAL V(ii) .			..	152	64.10	102	39.76	270	234	176	74.00	74	42.17
	SUB-TOTAL V .			..	648	327.10	502	245.86	1070	794	963	463.00	463.00	460.65
VI.	Industrial Motors .		600	210	200	70.00	124	53.70	600	210	200	80.00	166	83.19
VII.	*Heavy Rotating Plant*													
	1. Large Electrical Motors	HP/ Nos.	30000 (15)	30	19600 (12)	23.00	17600 (11)	32.62	30000 (15)	30	28500 (17)	66.00	4	13.00
	2. Water Turbine .	MW/ Nos.	500 (7)	430	30 (2)	14.00	..	..	500 (7)	430	96 (4)	99.00	129	142.00
	3. Steam Turbine Generators	MW/ Nos.	607 (2)	70	60 (2)	70.00	30 (1)	20.02	60 (2)	70	30 (1)	37.00	30	45.28
	SUB-TOTAL VII .			530		107.00		52.64		530		202.00		200.28
VIII.	Water Turbine .	,,	500 (7)	400	81 (3)	80.00	33 (1)	40.41	500 (7)	400	108 (3)	105.00	..	76.54
IX.	Steam Turbines	,,	60 (2)	200	30 (1)	105.00	..	6.32	60 (2)	200	12*	60.00	6	36.70
	GRAND TOTAL .	,,		3025		1912.10		1398.72		39.19		2192.00		1964.24

NOTE :—1. Installed capacity has been worked out by the Management on the basis of know-how facilities developed.

2. Out-put for each type of product has been estimated by the Management to make the figures comparable with previous years and excludes increase in works-in-progress and other miscellaneous adjustments on account of Departmental works.

*3. *This includes 4 Nos. of Condenser and Feed Heaters and 8 Nos. of Heat Exchangers and coolers.

APPENDIX II

(*Vide Para* 7.4)

Overseas Exhibitions and Trade Fairs participated in by Heavy Electricals (I) Ltd. during 1963—71

Year	Country	Organised by	Extent of participation
1963	Moscow (USSR)	Govt. of India	Products, photographs and charts etc.
1964-65	New-York (USA)	-do-	-do-
1966	Bangkok (Thailand)	-do-	-do-
1967	Montreal (Canada)	-do-	-do-
1968	Lima (Peru)	-do-	-do-
1968	Baghdad (Iraq)	Indian Council of Trade Fairs and Exhibitions.	-do-
1968	Khartoun (Sudan)	-do-	-do-
1969-70	Colombo (Ceylon)	Govt. of India	-do-
1969-70	Djakarta (Indonesia)	-do-	-do-
1969-70	Tehran (Iran)	-do-	-do-
1969-70	Zagreb (Yugoslavia)	Indian Council of Trade Fairs and Exhibitions.	Only Mica products and photography.
1969-70	Bagota (Br. Columbia)	Govt. of India	Photographs only.
1970-71	Singapur & Kuala Lampur (Malaysia)	-do-	Products, photographs and charts etc.
1970-71	Djakarta (Indonesia)	-do-	-do-
1970-71	Cairo (UAR)	Indian Council of Trade Fairs and Exhibitions.	-do-
1970-71	Damascus (Syria)		
1970-71	Izmir (Turkey)	Govt. of India	-do-

APPENDIX III

Summary of Conclusions/Recommendations contained in the Report

Sl. No.	Reference to Para No. of the Report	Summary of Conclusions/Recommendations
1	2	3
1.	2.16	The Twelfth Report of the Committee on Public Undertakings (4th Lok Sabha) which was presented to Parliament on 3rd April, 1968, the Committee had pointed out that some provisions of the agreements overlapped and some clauses of the Subsidiary Agreements were repugnant to the provisions of the main Agreements. The Committee regret to note that Government took more than a year to appoint a Departmental Committee to examine the matter. The Committee are also surprised that though the Departmental Committee submitted its Report to Government in January 1971, the Government took one more year to take a decision on the report of the Departmental Committee. The Committee feel that an important matter like this could have been handled by Government with greater expedition. The Committee expect that such delays will not occur in future.
2.	2.35	The Committee need hardly point out that if there are no standardised equipments and designs for hydro-electric turbines then the Main Agreement with Collaborators (Associated Electrical Industries) should have been worded suitably to bring out the intention precisely and in unambiguous terms.
		The Committee note that out of 30 sets of designs/drawings obtained under the main Agreement from the Associated Electrical Industries, the Undertaking have been able to adapt 15 of them for manufacture of turbines indigenously.
		The Committee suggest that Heavy Electricals (India) Ltd. should make full use of design drawings already available under the Main Agreement from the Associated Electrical Industries in order to adapt and improve upon them to suit the requirements of new hydraulic turbines/equipment

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		to be manufactured by the undertaking. The Committee consider that wherever it is not found feasible after careful consideration to make use of the drawing designs available with the Associated Electrical Industries under the Main Agreement then a considered proposal to purchase the drawing desgin from the English Electric Company may be brought forward before the Board of Directors and their prior approval taken before incurring additional expenditure. The Committee need hardly point out that this course of action would ensure that proper record of the decision taken to incur additional expenditure would be available for future reference and use.
3.	3.8	Time is the essence of success of any Commercial Undertaking. The Committee regret to note that delay of about two years occurored in sanctioning the Revised Project Estimates of the undertaking. The Management of Heavy Electricals (India) Ltd. took more than a year to approach Government for sanction of the revised project estimates of Rs. 6,110.61 lakhs after they were approved by the Board of Directors of the Company and the Government took another ten months to accord their sanction to the above-mentioned revised estimates. During evidence it was conceded that Government should have taken much less time. The Committee are convinced that both the Management and Government had taken more time than what was warranted. The Committee are surprised that the Project Estimates were revised five times. The Committee recommend that Government should lay down clear guidelines in the matter and that the procedure for processing the revised estimate should be streamlined with a view to finalising them and communicating the orders without loss of time. The Committee need hardly point out that while examining such upward revision of estimates, Government should go into its impact on the economics of production; in fact that estimates should be so realistically framed that there should be no need for their revision.
4.	3.26	The Committee note that Heavy Electricals (India) Ltd. have undertaken eight expansion schemes at an estimated cost of Rs. 16.05 crores to cover the manufacture of items like power transformers, traction motors steam turbines, etc. The objects are stated to be manufacture of products in higher range, provision of balancing facilities and catering to changes in demand, etc. The Committee find that in six out of these eight schemes, no specific target dates for their completion were fixed. Not only this, some of these expansion schemes for example, Traction Equipment Expansion Project, have been undertaken even though a

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		part of the existing capcacity was stated to be lying idle. The Committee cannot too strongly stress that before any expansion scheme is allowed, Government should make sure of the requirements on short term and long term basis, the economics of manufacturing them in the Project by expansion and laying down a time bound programme for production. The progress of work should be carefully watched both at the level of the undertaking and Government to ensure that the target dates for installation and manufacture are adhered to so that the objectives underlying expansion are achieved.
5.	3.51	The Committee note that in 1963-64, Government of India and Planning Commission gave an indication of the likely demand for ten 120 MW sets of steam turbines in the country during the period of 5 years i.e. from 1966-67 to 1970-71. Taking this into account the Government of India sanctioned the Steam Turbine Expansion Project in 1963 at an estimated cost of Rs. 997.87 lakhs (revised to Rs. 1,465 lakhs in March, 1968) with an output of a maximum of seven sets at the rates aggregating 600 MW per annum. The Committee also note that the first set of 120 MW turbine was imported and delivered straightway to the customer by 31st March, 1969. The order for other 4 sets were received between March, 1968 and August, 1969. The Committee are surprised that the orders for the manufacture and supply of the Steam Turbines were not received by the Heavy Electricals (India) Ltd. in accordance with the indications given by the Planning Commission and the Government of India in 1963. The Committee, therefore, recommend that a realistic demand analysis should always be worked out by Government before embarking on production or an expansion programme.
6.	3.52	The Committee are a little puzzled by the phenomena of shortage of power in most parts of the country and lack of firm orders on the Undertaking for manufacture of generators and turbines. The Committee are, therefore, of the opinion that there is urgent need for integrated planning and coordinated execution.
	3.53	The Committee find that the "Supplementary Project Report" prepared by the Consultants did not contain any profitability study. This profitability study was made only in March, 1958 i.e. after a lapse of a period of about 5 years. The Committee are distressed to note that completion of the project has lagged behind and delivery schedule drawn up by the Management even for those sets for which firm orders

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		were received, had not been kept up. On the basis of projections made in February, 1967, for example, 8 sets were to be delivered by August, 1970 but against this only one set had been delivered even though the delivery schedule as planned by the Management was rather long as compared with the normal cycle of 3 years for manufacture of a steam turbine. The Committee recommend that the management of Heavy Electricals (India) Ltd., should take advantage of modern management techniques like Programme Evaluation Review Technique (PERT) to guard against the usual inadequacies and pit falls in the matter of ensuring adherence to delivery schedules.
7.	3.54	The Committee also note that according to the indications given by the Management to the Government of India in August, 1969 the value of materials and components order till then for amanufacture of steam turbines was about Rs. 17 crores out of which total expenditure incurred upto August, 1969 amounted to Rs. 14 crores. The Company had thus to keep its resources locked up for long. The Committee are, therefore, of the view that Management of Heavy Electricals (India) Ltd. should not have ordered for major components so much in advance of firm orders and allowed its scarce resources to be so blocked leading to avoidable burden on account of payment of interest. The Committee recommend that in future, the Management of Heavy Electricals (India) Ltd. should so plan its development of pre-production that the facilities created for the purpose do not remain unutilised and their capital does not remain stuck up for long periods.
8.	3.55	The Committtee find that the very purpose of acquiring components etc. in advance was defeated by the delay in placing orders by the customers like the State Electricity Boards and also by slow development of expertise by Heavy Electricals (India) Ltd. to execute the orders. The Committee are of the view that advance planning for acquiring components and parts would have served larger interests of the country had there been integrated planning in related spheres.
9.	4.28	The Committee note that the orginal Detailed Project Report as submitted by the Consultants in the year 1956 had envisaged an annual output of Rs. 12.5 crores on single shift basis. In April, 1966, the Management estimated that on attainment of the full rated capcity the value of production would be Rs. 33.65 crores. Subsequent assessment of the final capcity which would be reached by 1973-74 was expected to be Rs. 69.35 crores. Projections made for profitability study put the value of output in 1973-74 at Rs.

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		52.19 crores. The Committee find that when the annual output was estimated in 1966 at Rs. 33.65 crores, no time bound programme for gradually achieving the capacity from year to year was drawn up nor was any indication as to the number of years required for achieving full planned output made. The Committee are surprised that it was only in 1967-68 that the Company indicated the installed capacity for the first time. It is unfortunate that the Management of Heavy Electricals (India) Ltd. had been fixing targets of production much below the installed capacity. The performance of actual production has left wide gaps because the actual production fell short of even the targets fixed by the Management itself. It is indeed deplorable that in 49 cases the production shown to have been completed by 31st March, 1969 was not despatched till February, 1970. The Committee recommend that reasons for fixing targets below the installed capacity and the actual production being less than even those targets should be probed into by Government to ensure better performance in future.
10.	4.29	The Committee find that in their report for the period ending November, 1969 the Consultants had referred to deterioration which had set in, in the Fabrication Department of the Company and observed that the oft repeated criticism that there is insufficient fabrication area is not valid. The Consultants have disclosed that what is happening is that "jobs are standing on the shop floor, occupying manufacturing space, for far too long a time." The Committee recommend that as the Fabrication Department occupies a key position and acts as a feeder department to other departments of the Company, the Company should ensure hat there is no hold up of fabrication jobs in the fabrication department.
11.	4.30	During evidence the Managing Director of Heavy Electricals (India) Ltd. stated that the statement that "even for foreign heavy electrical manufacturers of world standing it was not possible to realise full capacity of all the products and that 75 per cent realisation should be considerd reasonable" was based on his knowledge and experience of what was happening in other countries. The Committee were not supplied with any other detailes in support of this statement. Whatever be the actual position in other countries, the Committee recommend that the Mangement of the Heavy Electrical (India) Ltd. should regard it as their supreme duty to raise the level of Production to an extent that the gap between the installed capacity and the actual production is narrowed down, if not altogether eliminated.

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12.	4.56	The Committee find that according to the reports submitted to the Management Committee on 18th September, 1969, 49 important orders relating to Industrial Machines, Switch-gear, and controlgear, heavy plant, industrial application transformers, flange proof motors, hydro plants were running behind schedule. These cases fall under three broad categories *viz.* (i) where customer cancelled the order placed by him; (ii) where the despatch of the goods was deferred at the instance of the customer and (iii) where the despatch could not be arranged because the associated equipment was not ready. The Committee were informed that the main bottleneck in ensuring timely manufacture of turbines was delay on the part of foreign and indigenous suppliers in supplying castings and forgings and special types of bearings required for the manufacture of turbines or supply of defective castings and forgings which had to be got rectified. The Committee fail to understand why there was lack of foresight and coordination between the various departments and Government sectors which were responsible for such delayed deliveries. The Committee, therefore, recommend that Government should provide all assistance to indigenous suppliers to develop their capacity to manufacture such important parts like forgings, castings and even bearings which are essential products in the manufacture of power equipments so vital for the achievement of the Power Plan. The Committee also recommend that Government may consider the feasibility for obtaining castings and forgings of required specifications from other public undertakings like the H.E.C.
13.	4.59	The information furnished by the C.W.&P.C. reveal that the completion of 6 Hydro Projects and 3 Thermal Projects in the country has either been delayed or would be delayed due to non-adherence of delivery schedules by the Heavy Electricals (India) Ltd. This analysis indicates that generation of nearly 1425 MW of power has been shifted back. The delay caused in the completion of various projects ranges from one year to three years and five months. The Committee note that for commissioning of 9.2 million K.W. of additional generating capacity HEIL and BHEL are to supply 30 Hydro Units of 1.57 M.W. and 9 thermal units of 0.72 MKW. According to the schedule of delivery HEIL is yet to supply 20 units of 1.29 MKW Hydro sets and 5 units of 0.57 MKW to Thermal sets. Due to delay in delivery of the sets ranging from 12 to 41 months, completion of 6 hydro Electric projects and 3 thermal projects have been/will be delayed and consequently generation of 1425 MW of power has been put back. The Committee regret to note that the latest revised delivery schedule indicated in

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		June, 1971 is likely to slipback further in some cases. It need hardly be pointed out that such delays have affected the growth of industrial production and investments both in public and private sectors besides having other implications. In the first instance the Company will be put to a financial loss due to payments of penalties to the customers under the penalty clause. Secondly, the confidence of the customer is shaken by not getting timely supply of the equipment which ultimately affects order position and the reputation of the Company. The Committee, therefore, emphasise among other things, the need for advance planning and closer coordination between the manufacturing units and Electricity authorities. The Committee strongly recommend that Government and the Board of Directors of Heavy Electricals (India) Ltd. should keep a special watch on the progress made by the Company from month to month, identify the causes of delay and take remedial measures without delay.
14.	4.60	The Committee also recommend that since Heavy Electricals (India) Ltd. is engaged in manufacturing heavy equipment for the power generating projects under the administrative control of Ministry of Irrigation and Power, Government may consider the advisability of transferring the administrative control of the Undertaking from the Ministry of Industrial Development to the Ministry of Irrigation and Power which is responsible for generation, transmission and development of power in the country.
15.	4.67	The Committee cannot look with equanimity the fact that in order to adhere to the delivery schedule, the Heavy Electricals (India) Ltd. had to off-load orders of the value of Rs. 53.94 lakhs during 1968 and 1969 and of the value of Rs. 2.50 crores during 1970-71 to other manufacturers both in India and abroad. The Committee recommend that both the Management of Heavy Electricals (India) Ltd. and Government should go into the reasons for which the Company have to go in for 'off loading' and should take remedial measures to speed up their production in order to obviate 'off loading'. The Management should, of course, ensure that the cost of manufacture in their factory itself should be at least competitive if not lower than what it cost by 'off loading'. During evidence it was revealed that at times the Company resorted to barter deals by exchanging steel sheets available with them with the sheets which they needed. These deals were entered into and even reflected as such in the accounts of the Company. The Committee cannot see why it should not be possible for the Government to see that the Company is assured of supply of material needed by

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		it to keep its production going especially when such material is available in the open market. The Committee recommed that Government should look into such difficulties of the Company as this and help them to overcome them without delay.
16.	4.78	The Committee find that expenditure incurred on 'rectification and replacement' of defective works has increased from Rs. 3.25 lakhs in 1966-67 to Rs. 5.79 lakhs in 1970-71 a rise of about 76 per cent. During evidence, the representative of the Ministry of Industrial Development stated *inter alia.* "I submit that a certain amount of defective material may come in, inspite of our vigilance." The Committee cannot see why there should be such a high rate of increase. If the vigilance is effective, defective material should be negligible. The difficulty however is that castings and forgings are accepted by Heavy Electricals (India) Ltd. on "visual inspections" only and it is only when the top surface of it is scraped, then that some times defects came to notice. The representative of the Ministry admitted that there were X-ray machines and Ultra-sonic Detectors which could go through the castings and show up the defects but he thought their use would not be advisable. First, these machines were stated to be expensive. Secondly, it would be difficult to take these machines to the companies from whom castings and forgings are to be purchased. The Committee recommend that the possibility of use of these modern devices for detection of defects in the castings and forgings sould be explored further in conslutation with other public undertakings who use castings and forgings. The point to be considered is whether one should go in for these modern machines once rather than waste money and time year after year on rectification of defective works.
17.	4.84	The Committee note that percentag of 'idle time' in Heavy Electricals (India) Ltd. to total direct wages as booked had been ranging between 16.0 to 19.8. Absence of work and material accounted for roughly 73% of the total idle time. The Committee find that idle time is occasioned in specific areas due to imbalance in the work-flow. The Committee recommend that work scheduling should be planned on a realistic basis and planning and product control machinery in the Heavy Electricals (India) Ltd. should be geared up so as to minimise idle time. It is hard to understand much less justify that an undertaking like Heavy Electricals (India) Ltd. which is unable to conform to its delivery schedules should have idle time as high as 20 per cent.

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18.	4.94	The Committee regret to note that despite the observations of the Bureau of Public Enterprises about the atility of introduction of the composite machine hour rate, the Management of Heavy Electricals (India) Ltd. have been content with "Job Card System" which recorded the work put in by a workman but not the machine hour rate. During evidence the representative of the Ministry of Industrial Development admitted "But there is a lacuna in this system (i.e. job card system), that is, we do not have a readily available system in which utilisation of each machine as such is also indicated... I think this system (i.e. machine "hour system" has to be introduced). The Managing Director of the Company said, "We do agree that machine utilisation is necessary". It is surprising that though Heavy Electricals (India) Ltd. have been in existence for more than 15 years, they have not thought of introducing machine hour utilisation system. This system should be introduced without further loss of time because it will enable the management to gauge the extent of under utilisation of Machines and explore the possibility of undertaking jobs for others. Government should take an early decision on whether or not Heavy Electricals (India) Ltd. should go in far a computer.
19.	4.102	The Committee note that in their report for the period ending November, 1969, the consultants had pointed out that there were 1887 junior supervisors at the Bhopal factory overseeing the work of 10,649 lower grade workers in both works and offices, the ratio being 5.6 workers per supervisor. During evidence, the representative of the Heavy Electricals pointed out that consultants had arrived at that ratio by including even the supervisory staff working in their Design Office. At the shop, the ratio was about 12.7 workers per junior supervisor. The present ratio (as on August, 1970) per junior supervisor taking into account junior officers as per of junior supervisory staff to workers. The Committee also note that the ratio of workers to "First line supervisors" was 14.4 : 1.
		The Committee recommend that Government/Management may consider fixing suitable and realistic nomrs for Supervisors workers ratio on the shop floor at different levels, if necessary with the assistance of Management experts and issue instructions for adhering to such norms.

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20.	5.12	**The Committee feel that adherence to delivery schedule is vital in attracting customers in any undertaking for improving the order book position. They note that according to order book position of Heavy Electricals (India) Ltd., as on 31st March, 1970** the shops will be kept busy for only 2½ years in the case of transformer, about 20 months in the case of industrial motors, for about 3 to 4 years in the case of Generating Plant.
		The Committee also note that as on 30th September, 1971 the Heavy Electrical (India) Ltd. had orders of the value of Rs. 222.45 crores and that the delivery was due during the next five years. During evidence the representative of Ministry of Industrial Development explained "It is difficult for us to keep track of all individual orders because here alone orders worth Rs. 222 crores are pending and we have to consider something like 500 individual orders for individual items." The Committee are unable to accept the view point of the Ministry. Failure to ensure observance of Time schedule and delay in the execution of orders act as inhibiting factors in getting fresh orders from the customers. The Committee, however, recommend that Government should at least review the progress of execution of important orders from time to time so that difficulties faced by Heavy Electricals (India) Ltd. are indentified and Government are in a position to render help to the undertaking to remove the difficulties which retard orderly progress of execution of orders. They also recommend that the undertaking should locate other difficulties, if any, which affect the order position and ensure that they do not recur in future. Most of the customers who place orders with Heavy Electricals (India) Ltd. are organisations in public sector. The Committee do not, therefore, see why it should be difficult for the Management of the Company and Government to embark upon an integrated and detailed planning to ensure that Heavy Electricals (India) Ltd. have, at all times, orders for execution from 3 to 5 years which would in turn ensure efficient production in the undertaking.
		The agreement entered into by HE(I)L with the Consultants which had put restrictions on export of their products, expired in November, 1970. In the revised agreement no limitations on export

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		jurisdiction of the Company have been imposed. The Committee, therefore, strongly recommend that all out efforts should be made both by the Management and Government to attract more orders from other countries and thereby increase exports.
22.	6.27	The Committee find that Heavy Electricals (India) Ltd. are manufacturing products in two distinct categories viz. 'competitive range', 'semi-monopoly' or 'monopoly range'. As far as "monopolistic" and "semi-monopolistic" equipments are concerned, the instructions issued by the Bureau of Public Enterprises stipulate that ordinarily the "landed-cost" of comparative imported equipment should be regarded as the absolute ceiling but where there are reasons to believe that the F.O.B./C.I.F. prices for imported equipment are artificially low or in other exceptional circumstances where cost of production of indigenous manufacture is very high, prices may be fixed higher than the landed cost with the approval of the Ministry of Finance. As regards "competitive" items, Heavy Electricals (India) Ltd. have recently introduced a system under which normal estimate is made for all the elements of cost, and the price is reduced to the market level specifying reasons for such a measure. Heavy Electricals (India) Ltd. have expressed the view that "barring certain standard products bulk of manufacture in the monopoly region does not lend itself to comparison with the landed cost. The Committee recommend that HE (I) L should evolve their pricing policy in such a way that prices fixed by negotiations with the customer are equitable and as far as possible are not more than the landed cost of comparable imported equipment following more or less similar design philosophy. While the Committee agree that prices of products in the competitive range have to be regulated by the principle of "What the market can bear". The Committee recommend that some guidelines should be issued to the Commercial Department to ensure that the selling prices of products in the competitive range are not unduly below the cost of production. In fixing the selling prices, the Committee would urge Government that utmost care should be taken to ensure that for overheads are, as far as possible, absorbed in the prices. The Committee would stress the need for improving efficiency, increasing output and effecting economy so that

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		the prices charged by Heavy Electricals for various products compare favourably with the internal price obtaining in exporting countries in respect of the particular product.
23.	6.33	The Committee regret to note that though the Sales Contracts entered into by the Company during the period from December, 1963 to August, 1966 included a Price Variation Clause the Management did not take any action to enforce this clause and to assess the claims recoverable on this account till December, 1969. The Committee observe that the very purpose of having such a clause in the sales contracts is defeated if it is not enforced properly and timely action is not initiated to lodge claims for recovery of the amounts. It transpired during evidence that in respect of contracts after August, 1966, the Company introduced a revised 'price variation clause' which is operated on the basis of indices published by the Board of Trade in U.K. The Committee recommend that a periodical assessment should be made by the Management, claims preferred on the parties concerned and concerted action taken to ensure speedy realisation of the amounts recoverable. The Committee also recommend that responsibility should always be fixed for any failure to take timely action in this regard.
24.	7.8	The Committee note that the Heavy Electricals (India) Ltd. had no discretion in the matter of export of their products due to the restrictions imposed by the Consultants in the Consultancy Agreement till November, 1970. As the embargo on export jurisdiction has since been removed, and as there is considerable scope for its products in developing countries, the Committee recommend that the Company should explore all possible means of expanding its export trade for their standard products in order to utilise full capacity of the Plant.
25	7.18	The Committee find that there was no specific provision in the Project Report for activising self-reliance by developing indigenous substitution for imported raw materials and components. The Committee note that though a separate cell was set up for import substitution by the Company with effect from the 27th November, 1965, the performance of the Company during the last five years

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		i.e. from 1966-67 to 1970-71 towards import substitution had been an appreciable increase in the percentage of import content in switchgear, traction motor and capacitors while the Company has been fixing increasing targets for import substitution the percentage of achievement has actually shown downward trend.
		The Committee were informed that the following difficulties stood in the way of achieving self-sufficiency.
		(i) The indigenous manufacturers could not develop as envisaged in their programme.
		(ii) The customers were reluctant to accept unproven indigenous materials.
		(iii) Achievement of cent per cent indigenous contents is not a practical proposition.
..		The Committee recommend that Government should take immediate steps to help the indigenous manufacturers so that they do not lag behind in their production programme. Urgent steps should also be taken to standardise and improve the quality of the products of Indian Manufacturers so that these are readily accepted by the customers. The Committee suggest that assistance of Research Institutions in the country should be taken in developing indigenous substitution for items of raw materials and components in order to achieve self-reliance.
		The Committee also recommend that Government should chalk out a time-bound programme for achieving indigenous production of items which are being imported at present.
26	8.15	The Committee note that an analysis conducted by the Cost Accounts Department of Heavy Electricals (India) Ltd. regarding cost of the manufacturing orders, indicated that in majority of cases, the selling price covered the estimated factory cost. The actual factory cost was found to be higher than both the estimated factory cost and the selling price. The variations between the estimated and actual factory costs were not analysed to find out the precise reasons for taking the necessary remedial measures. The Committee also note that the Cost

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		Accounts Department, in its quarterly report for quarter ending June, 1969 had *inter alia* observed, "It is very necessary that we have a regular system of cost investigation for every product and the reports of the investigation must be made available both to the Cost Department and the Management Committee for any further action." The Committee find that, though the system of Cost Investigation was formally introduced in the Heavy Electricals (India) Ltd. with effect from the 12th December, 1969, investigation of variation between the actual factory cost, and estimated factory cost is not being done in a systematic manner. Education and understanding with regard to the timely and proper use of documents corrected with the system, coordination and understanding between various departments still remains to be achieved. The Committee note that in regard to the orders completed during the year 1970-71, against the value of material worth Rs. 857.49 lakhs provided in the estimates the actual consumption of the materials was Rs. 705.93 lakhs. The Committee feel that while the cost of materials actually consumed may be higher than the value provided for in the estimates on account of rise in cost, the reasons for reverse trend need elucidation, particularly when it is claimed that there was no appreciable change in the physical quantity of the materials. The Committee also recommend that endeavours should be made to place the existing cost Investigation System on a more systematic and scientific footing not only in respect of the established products of the Company but also each item of manufacture.
		The Committee emphasise the need for developing a proper Management information system by which desired information and analysis in respect of Sale Price, Estimated Factory Cost Value and Actual Factory Cost Value for all orders become available for taking timely corrective action and adjusting suitably the trend for future quotations. Cost control being one of the essential tools of Management, the Committee urge that unless a scientific cost control system projected on the basis of accumulated experience of the past and latest trends is developed, Management may not be able to effectively check cost trends of products in the interest of efficient and economic management. The Committee cannot too strongly stress the need for con-

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		cereted action to bring down the cost of manufacture so that the capital machinery and equipment which are mostly used for generation of power become available to other public undertakings/ statutory bodies at prices comparable to those obtaining in international market.
		The Committee also recommend that the analysis of cost should effectively be utilised for comparison with the rates prevailing in the international market.
27	9.11	The Committee are unhappy to find that specific instructions issued by the Bureau of Public Enterprises about regulating the purchase orders in 1969 did not receive prompt attention. The Committee are also surprised that the instructions issued by the Bureau of Public Enterprises as early as January, 1969 were received by Heavy Electricals only in August, 1969 *i.e.* after a gap of about 7 months and another year was spent by HEIL in obtaining clarifications and seven to eight months more were taken in placing the matter before the Board of Directors for obtaining a decision. The Committee desire that the Public Undertakings should act with greater promptness and earnestness in bringing the general directives issued by the Bureau of Public Enterprises, and/or the Administrative Ministry concerned to the notice of the Board of Directors and implementing them. In fact, the Bureau of Public Enterprises the Administrative Ministry concerned should have a procedure for following up the action taken by the Undertakings on their directives to see that no avoidable delay takes place in implementation of the orders. The Committee note that 75% of the total purchase being made by the Corporation are handled by Purchase Committees in which a representative of the Finance is presented. The Committee desire that a systematic analysis should ba made of the remaining 25% purchases also to see which cases could be brought further within the purview of the Purchase Committee. The Committee recommend that the procedure governing these purchases should be such as to ensure competitiveness in rates of suppliers and recording concurrently the reasons where a lower offer is not accepted or where the difference between the purchase price proposed to be paid and the previous price paid for it is more than the prescribed percentage.

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28.	9.24	The Committee regret to note that there were heavy inventory in the Company. The closing balance of inventory, raw material and components, stores and spares and work in progress was Rs. 38.21 crores at the end of the year 1968-69 which was equivalent to 106 per cent of the total production during the year 1969-70. The Committee find that one of the reasons for heavy inventory was that there was not effective coordination between different indentors of the Company resulting in repeated indents for the same materials. The Stores were purchased without coordinating the actual requirements till 1965-66 which resulted in huge accumulation of stocks. The Committee are perplexed at the paradoxical position that while on the one hand the Company had heavy inventory and surplus store on the other hand there was delay in the manufacture for want of raw materials. The representative of the Ministry of Industrial Development conceded during evidence that 'the inventory must be so managed that you have got in stores whatever thing you need and we should not be forced to stop production because of lack of spare parts or raw material'.
29.	9.25	The Committee recommend that the existing inventory system should be improved and the inventory so controlled as to provide all the raw materials necessary for maintaining a smooth flow of production without at the same time creating an undue accumulation of materials and spare parts. The Committee suggest that the Company should explore the possibility of using computers for this purpose. The Committee also recommend that serious efforts should be made to achieve coordination between receipt of purchases from outside and items produced in the workshops.
30.	9.26	The Committee wish to draw attention of the Management to various recommendations contained in their 40th Report (3rd Lok Sabha) on 'Material Management'. The Committee have no doubt that implementation of those recommendations would go a long way to improve inventory control in the enterprise.
31.	9.27	The Committee also find that maintenance of records in respect of inventory in the Company was defective as value of raw materials and components not processed or consumed at the end of the year but issued

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		to workshops were shown as work in progress. The Committee feel that this procedure gives a misleading picture about the work in progress and raw materials. The Committee, therefore, desire that the present system of showing the raw materials etc. charged directly to works as work in progress should be revised and such raw materials etc. which have not been processed at all should be included in the value of the raw materials and components for purposes of accounts.
32.	9.32	The Committee find that the value of non-moving stores at the end of 1970-71 which had not moved for two years or more amounted to Rs. 115.20 lakhs and value of surplus stores as on 31.3.69 was Rs. 61.36 lakhs. The Committee note that the surplus in the manufacturing stores arose out of the imbalance and changes in the manufacturing programme. The Committee also note that non-moving stores and surplus stores have been identified over a period of ten years and comparison made with the value of total purchases. The Committee recommend that the determination of surpluses and non-moving items should be a continuous process for which the Company should undertake periodical review and serious efforts should be made to dispose off such non-moving and surplus stores as the Company no longer requires. The Committee also recommend that now that the period of initial development of the Company is almost over it should not be difficult for the management to evolve norms for procurement of materials and make assessment of their requirements for the next two or three years on realistic basis so as to avoid unnecessary accumulation of surplus and non-moving stores which not only lock up the scarce capital but also push up the cost of production.
33.	9.38	The Committee note that the Company imported in 1962-63, 70,750 numbers of wired glasses from Poland against sterling payment (Rs. 8,69,494) for use in the proposed construction of four factory blocks in anticipation of Government's approval which was ultimately withheld. On 5th April, 1967 about 5,100 Nos. of glasses were damaged as a result of fire. 11,816 wired glasses were found short on physical verification conducted on 13th

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		October, 1967 due to breakage. The Company thus suffered a loss of Rs. 1.22 lakhs. The Committee find that undue haste has been shown for importing the glasses (without waiting for formal approval) against much needed foreign exchange. Secondly, sufficient care was not taken to make proper arrangements for storage of the glasses with the result that, the Company sustained a financial loss not only because of the damage caused to the glasses but also by keeping their capital blocked for a number of years. The Committee recommend that construction stores should not in future, be imported procured unless the Management had approved the approval of Government for the proposed construction for which the material is required. Proper arrangements should always be made for the storage of material particularly delicate and breakable till it is consumed.
		The Committee understand that by the time the Bureau of public Enterprises took up the question of disposal of surplus material available in various projects *vide* their circular of 4th October, 1967, the Company had no glasses to dispose off. This shows that the glasses must have been salvaged and sold by the Company in September, 1967. The Committee also understand that the amount payable by the Insurance Company became known in May, 1969 and the matter was reported to the Board of Directors thereafter. The Committee deprecate the delay of about two years in reporting the case to the Board of Directors and recommend that such delay should be avoided in future.
34.	9.45	The Committee note that the two purchase order placed on M/s. Associated Electrical Industries, U.K. by Heavy Electircals (India) Ltd. on 31st October, 1964 and 10th December, 1964 did not provide for any specific date of delivery of the material. The Committee also note that in regard to the order placed on 10-12-1964 the departmental purchase requisition and the offer dated 18-8-64 valid for 60 days received direct from M/s. AEI were forwarded by the indenting department to Purchase Department after the expiry of the validity of the offer with the result that Purchase Department had to approach M/s. AEI for extension of validity to which they agreed subject to price variation clause. Though the two

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		orders were placed abroad for meeting the production programme of the Company for 1965-66 as the supply was sufficiently delayed, it was proposed to cancel the orders. When M/s. AEI demanded £ 29,900 as cancellation charges, the Company was prepared to accept the supply against those orders in February, 1966 and May, 1967. The Committee find that the very purpose for placing orders which involved payment of £ 50,789 in foreign exchange was defeated because of the inordinate delay in supply. The Committee are surprised at the careless way in which such an important time bound case affecting the progress programme was handled. The Committee feel that the case deserves a through probe which should be initiated, the responsibility fixed and suitable action taken against the defaulters. The Committee also recommend that purchase orders with foreign firms should be placed only after satisfying fully about the suitability of the delivery period, keeping in view their past performance in the manufacture and supply of the components.
35.	9.52	The Committee note that while the supply of 1500 MT CRGO Steel Grade 46 ordered with the foreign firms was under execution, the production Planning Department (Transformer Division) of the Company found that the stocks already with the Company were in excess of their immediate requirements. The Committee also note that the 300 M.T. of this steel was sold on 1st May, 1969 to M/s. Guest Keen Williams of Bomaby who were experiencing difficulty in procurement of that steel. The Committee find that the steel was sold at issue rate plus commercial and Administrative charges at a reduced percentage which resulted in short realisation amounting to Rs. 3,64,350. Subsequently the Company procured 650 tonnes of the same grade CRGO steel at approximately £ 20 per MT more than the previous price order for which was placed on 14-12-70. The Committee observe that Heavy Electricals (India) Ltd. had not only to pay £ 13,000 (Rs. 2,34,000/-) extra for the same grade of steel which they had sold earlier but had also to forego the benefit of import licence to that extent. The Committee are somewhat intrigued by the unusual concern show by the Heavy Electricals in reducing their inventory in this particular scarce material *i.e.* CRGO Steel grade 46 and that too in favour of a private party. The Committee are not sure whether inventory in respect of

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		other imported items also has been was restricted to the same period of requirement or it was particularly considered necessary in the case of imported steel and that too in a particular grade.
		The Committee are not convinced about the justification for charging lesser rate of departmental charges in this case when in the case of sale of surplus items, departmental charges at the rate of 50 per cent of the issue rate is normally charged and when import Control regulations do not stipulate a particular rate of recovery while calculating the so called saving, management appear to have taken into account interest charges at 12 per cent against which the interest paid by the Company on cash credit to the State Bank of India is only 8 per cent. If there was an anxiety to reduce the inventory in steel for this particular grade it would have been better for the undertaking to exchange it with steel of the requisite quality from another sister Public Undertaking. The Committee are not convinced by the explanation given by the Management. The Committee recomend that Government shou!d consider undertaking a probe in the matter.
		The Committee feel that Government should also issue suitable instructions to ensure that transactions of this nature, particularly in sacre and imported raw materials, do not recur.
36.	10.6	The Committee also note that in 1968-69 there was a manufacturing profit of Rs. 138.11 lakhs for the first time. The bulk of this profit (Rs. 118 lakhs) was, however, earned on purchases resold. The corresponding profit on such purchases resold during 1966-67 was Rs. 23 lakhs and during 1967-68 it was Rs. 24 lakhs. The resale of goods purchased was based on the selling price fixed by the Company which had not even now been finally accepted by the customers. The Committee are of the view that the real operating results of the Company are far from satisfactory. For a manufacturing concern of the size of Heavy Electricals (India) Ltd. reselling of purchase made at a large margin of profit can hardly be considered as an important achievement.
37.	10.7	The Committee recommend that selling prices for resale of machinery and equipment purchased should be settled in advance to obviate misunderstanding

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		and long drawn out correspondence. The Committee also recommend that every endeavour should be made to improve the real output of the Company.
38.	10.7	The Committee find that Paid up Capital of Heavy Electricals (India) Ltd. is Rs. 50 crores. Its accumulated losses as on 31-3-1971 amount to Rs. 59.87 crores. This shows that the Company has already eaten up its entire Paid-up Capital. The Committee are perturbed over this grave financial position of the Company. The Committee stress that the Compnay should improve its financial position by greater utilisation of its capacity by effecting maximum economies and review of its pricing policy. The Committee also recommend that Government should review the capital structure of the Company to see if some changes are called for to improve the financial situation.
39.	10.36	The Committee note that the balance on account of overdraft has increased from Rs. 0.05 lakhs in 1968-69 to Rs. 100.04 lakhs in 1970-71. The Committee view with concern that there has been no significant improvement in the financial position of the Company and that Company is resorting to heavy borrowings as a result of heavy cash losses sustained by them. The Committee suggest that ways and means may be explored by the Company to have an effective cash management system and to ensure that the financing charges are kept to the minimum.
		The Committee also note that though the position of outstanding debts on 31-3-71 has shown an improvement over that on 31-3-1970, still large amounts are due to be realised from various Electricity Boards and Railways. The Committee are surprised to find that Government departments themselves ate responsible to the tune of 1.3 crore of rupees remaining outstanding for periods exceeding one year. The Committee, therefore, strongly recommend that the procedure of billing and collection of dues should be streamlined with a view to ensure realing of dues without any delay. The Committee also urge that a careful review of the outstandings should be undertaken to see that there is no overlapping of outstanding items with corresponding items of advances from the customers.

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40.	10.37	The Committee also regret the lack of promptness not only in furnishing the essentiality certificates but also in the matter of execution and filing of the bonds with the customs authorities which had prevented the Company from availing itself of the exemption from the payment of the customs duty. Such unconscionable delay on the part of the company had blocked a huge sum of Rs. 7.15 lakhs with the customs authorities with consequent loss of interest to the tune of Rs. 60 thousand. The Committee hope that the Company would take more effective steps to avoid recurrence of such delays in future.
		The Committee note that claims of the total value of Rs. 20.52 lakhs have been outstanding with carriers and underwriters on 31-3-1971 and 247 claims of a value of Rs. 10.17 lakhs were pending settlement with Inspool. The claims pertained to the period from 1963 to 1965 and included both sterling and rupee claims 55 claims of the value of Rs. 1.8 lakhs have been repudiated by the underwriters either as time barred or on the ground that they were not responsible for shortages. The Committee are surprised to find that the Management have not taken any action to investigate the reasons for the delays in filing the claims and to fix the responsibility, therefor on account of which the Company had been put to financial loss. The Committee understand that all the claims which were outstanding with the Inspool had been transferred to LIC with effect from 1-1-1966. The Committee need hardly emphasise the need for analysing each and every outstanding claim and persuing it with LIC authorities with a view to have expeditious settlement thereof.
41.	10.38	The Committee would also urge that a careful scrutiny of the remaining items should be done and authorities moved at the higher level to have the claims settled expeditiously so that they may not also ultimately become time-barred or otherwise become ineligible for settlement.
42.	10.40	The Committee note that though the Bureau of public Enterprises issued broad guidelines defining the main functions, responsibilities and powers of the Financial Adviser in May, 1969 in pursuance of the recommendation of the Committee on public Undertakings contained in their 15th Report (Fourth Lok

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		Sabha) the Board of Directors had not considered those guidelines till February, 1970. The Committee take a serious view of the casual way in which such important items concerning financial matters of the Company are treated. The Committee also note that the Financial Adviser was not being consulted in the following important matters:— (i) The quotation of rates for sale contracts; (ii) Fixation of sale price for part despatches; and The Committee are unable to appreciate how the management of the Company could exercise financial control on these important matters without consulting the Financial Adviser in matters affecting the Finances of the Company. The Committee recommend that in future all important orders issued by Government should be brought to the notice of Board of Directors who, in turn, should consider them promptly and take follow-up action without delay. The Committee strongly recommend that in future, the prescribed principles of financial control should be adhered to by all Undertakings including the Heavy Electricals (India) Ltd., Bhopal.
43.	10.59	The Committee note that from the estimates made in September, 1969, it appeared that Heavy Electricals (India) Ltd. expected to break even in the year 1973-74 at an out put of the value of Rs. 52.19 crores. Only after 3 months *i.e.* in December, 1969 while preparing the revised estimates for 1969-70 and budget estimates for 1970-71 the Management felt that the profitability study made in September, 1969 would not come up. During evidence it transpired that the Management took further into consideration the factors like Wage Board Award, continued payments to consultants etc. and worked out that the break-even point would now be reached at an output of Rs. 61 crores which was expected to be reached in 1973-74. The Committee are of the view that the Management should have made the profitability studies on realistic basis. The Committee desire that the Management and Government should spare no efforts to ensure that the break-even level of production of Rs. 61 crores is reached by 1973-74.

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44.	10.67	The Committee are surprised to note that the Internal Audit Department of Heavy Electricals (India) Ltd. had not been functioning effectively and did not care to cover even some of the essential aspects of the Company's transactions. The Committee have been informed that the working of the Internal Audit of the Company has been re-organised and placed under the control of the Financial Advisor and Chief Accounts Officer with effect from 1970 to whom quarterly Internal Audit Reports are being submitted, and a system of reporting important irregularities to the Board of Directors and Government through the quarterly Financial Review has been introduced. The Committee would like the Management to pay earnest attention to Audit paragraphs particularly those dealing with procedural lapses, so as to take remedial action without delay and obviate recurrence of such lapses.
45.	11.36	The Committee understand that a Memorandum laying down the appointment and promotion policy to be followed in regard to officers was put up to the Board of Directors in the 107th meeting held on 21-1-1969 but that item was referred by the Board of Directors to the sub-Committee in the 121st meeting held on 16-3-1971 *i.e.* after a period of more than two years and that the matter is still pending finalisation. The Committee feel that an important matter affecting appointment and promotion policies should have been handled with promptitude.
46.	11.37	The Committee have made horizontal studies on Personnel Policies and Labour Management Relation in Public Undertakings. In this connection, the Committee had occasion to have the evidence of Chairman/Managing Director of Heavy Electricals Limited, Bhopal. Based on the evidence and other relevant information available to them, the Committee have made concrete suggestions in the matter of recruitment, promotion, confirmation, training, redressal of grievances of workmen etc. The Committee have no doubt that if these recommendations are implemented in letter and spirit, the relations between the management and the employees are bound to improve.

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47.	11.3	The Committee note that the grievances procedure based on the lines of Model Grievance Procedure laid down under the Code of Discipline is being followed by the HEL for the redressal of grievances of the employees. The Committee would suggest that Supervisors/ Managers should also be given training to handle the grievances and to dispose them off effectively and sufficient delegation of authority should be given to them to deal with the grievances promptly.

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