

**THIRTY-THIRD REPORT
COMMITTEE ON PUBLIC
UNDERTAKINGS
(1987-88)**

(EIGHTH LOK SABHA)

**BHARAT ELECTRONICS LIMITED—CAPACITY UTILI-
SATION, PRODUCTION & PRICING, RESEARCH
AND DEVELOPMENT**

**(MINISTRY OF DEFENCE—DEPARTMENT OF DEFENCE
PRODUCTION & SUPPLIES)**

**[Action taken by Government on the recommendations contained in
the 13th Report of the Committee on Public Undertakings (Eighth
Lok Sabha)]**

*Presented to Lok Sabha on
Laid in Rajya Sabha on*



**LOK SABHA SECRETARIAT
NEW DELHI**

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**COMMITTEE ON PUBLIC UNDERTAKINGS
(1987-88)**

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**ACTION TAKEN SUB-COMMITTEE OF THE COMMITTEE ON
PUBLIC UNDERTAKINGS
(1987-88)**

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7. Prof. Saif-ud-din Soz

INTRODUCTION

I, the Chairman, Committee on Public Undertakings having been authorised by the Committee to submit the Report on their behalf, present this Thirty-third Report on Action Taken by Government on the recommendations contained in the Thirteenth Report of the Committee on Public Undertakings (Eighth Lok Sabha) on Bharat Electronics Ltd.—Capacity utilisation, Production & Printing, Research and Development.

2. The Thirteenth Report of the Committee on Public Undertakings (1986-87) was presented to Lok Sabha on 26 November, 1986. Replies of Government to all the recommendations contained in the Report were received by 31 August, 1987. The replies of Government were considered by the Action Taken Sub-Committee of the Committee on Public Undertakings on 7 October, 1987. The Committee also considered and adopted this Report at their sitting held on 7 October, 1987.

3. An analysis of the action taken by Government on the recommendations contained in the Thirteenth Report (1986-87) of the Committee is given in Appendix-II.

NEW DELHI;
October 27, 1987
Kartika 5, 1909 (S)

VAKKOM PURUSHOTHAMAN
Chairman,
Committee on Public Undertakings.

CHAPTER I

REPORT

The Report of the Committee deals with the action taken by Government on the recommendations contained in the Thirteenth Report (Eighth Lok Sabha) of the Committee on Public Undertakings on Bharat Electronics Ltd.— Capacity Utilisation, production & Pricing, Research and development which was presented to Lok Sabha on 26 November, 1986.

2. Action Taken Notes have been received from Government in respect of all the 25 recommendations contained in the Report. These have been categorised as follows:—

(i) *Recommendations/observations that have been accepted by Government.*

S. Nos. 1—4, 6—10, 12—14, 16, 19, 21, 22, 24 and 25.

(ii) *Recommendations/Observations which the Committee do not desire to pursue in view of Government's replies*

S. Nos. 11, 20 and 23.

(iii) *Recommendations/Observations in respect of which replies of Government have not been accepted by the Committee.*

S. Nos. 5, 17 and 18

(iv) *Recommendations/Observations in respect of which final replies of Government are still awaited.*

S. No. 15

3. **The Committee desire that the final reply in respect of recommendation for which only interim reply has been given by Government should be furnished to the Committee expeditiously.**

The Committee will now deal with the action taken by Government on some of their recommendations.

A. Assessment of rated capacity

Recommendation Serial No. 1 (Paragraph 1.60 to 1.65)

4. The Committee had recommended that the Government should appoint suitable Consultants or Expert Authority to determine the

rated capacities for companies like BEL which should determine a yard-stick for assessing the rated capacity utilisation on scientific basis. The Committee had also suggested that Government should also review the practice of deduction of 50 per cent of the total effective hours for purpose of working out the available standard man-hours per operator per year with a view to arriving at a better parameter for the meaningful assessment of the production performance of the company.

5. In their reply, the Government have stated that BEL on their advice had appointed the National Institute for Training in Industrial Engineering (NITIE), Bombay, to undertake a study on the capacity determination and labour productivity of the manufacturing facilities of the company. After carrying out a detailed study, NITIE is reported to have submitted a report to the Company pertaining to capacity determination and labour productivity in the equipment divisions of BEL. This report is stated to be under examination. Based on their recommendations and the methodology indicated for determining capacity of the equipment divisions, the Department of Defence Production will issue suitable instructions/directions to the Company.

6. The Committee need hardly stress that the report of the National Institute for Training in Industrial Engineering (NITIE) should be examined urgently to determine as to what extent the capacity determination and labour productivity of the manufacturing facilities of BEL have been fixed on scientific basis. The Committee would like to be apprised of the instructions/directions issued to the Company by the Department of Defence Production and Supplies on the basis of the recommendations made by NITIE in this regard.

7. The Government's reply is also silent about the review of the whole question of deduction of 50 per cent of total effective hours for the purpose of working out the available standard man hours per operator per year for arriving at a better parameter for the meaningful assessment of production performance of the Company. The Committee, therefore, reiterate their original recommendation. The Committee would also like to be apprised of the action taken by Government in this regard within 3 months of the presentation of this report.

**B. Supply of Defective components by collaborator
Recommendation Serial No. 5 (Paragraphs 2.12 & 2.13)**

8. The Committee had observed that BEL was to produce and despatch two Radars in 1984. Although, the Company completed all the work, their despatch to armed forces was held up as one IC obtained from the collaborators misbehaved. The Company was not able to get over the problem and ultimately the entire batch of ICs was returned to the collaborators and a fresh batch of ICs was received from them after a year. The Committee had recommended that the whole matter should be probed thoroughly with a view to fixing responsibility as to why the ICs were not properly tested in the Company when received from the collaborators and why the defect in the IC could not be got over by the Company itself and the consequent loss suffered by BEL on this account. The Committee had also desired to be apprised of the extent of the collaborator's responsibility involved in this regard and the action taken by the Company to realise damages from the collaborator on this account.

9. The Government have stated in their reply that it is an accepted practice to accept quite a number of types of components on the basis of the manufacturer's certifications either explicit or implicit. The reported defective Intergrated Circuits were accepted based on the manufacturer's certification. The Government have also stated that Integrated Circuits being sealed components and highly complex by their very nature of construction, the question of rectification did not arise and was not attempted. As the replacements received from the collaborator were free of charge, there was no loss suffered by the Company on this account, though there was a delay in completion of the equipment. The collaborator's/supplier's responsibility in this regard could only be to give replacement free of cost for the Integrated Circuits found defective. This was accepted by the collaborator who arranged to give free replacements very quickly.

10. The Committee are not satisfied with the Government's reply that the collaborator's responsibility with regard to supply of defective Integrated Circuits was limited only to give replacement free of cost. Although by this arrangement, there was no loss suffered by the company on the cost of the component, it did result in considerable delay in production and delivery of the vital equipment to the Armed Forces as the fresh batch was received after one year. The Committee cannot but express their serious concern over this delay. The Committee would, therefore, suggest that, in future, in the case

of components which are critical and accepted on the basis of the manufacturer's certifications, inspection should be arranged quickly so that replacements, wherever necessary, are arranged within a specified time limit, to be incorporated in the agreement. Suitable instructions in this regard may be issued by the Government.

C. High Profits charged by BEL from Defence and other Government Departments

Recommendation Serial No. 17 (Paragraph 2.107)

11. The Committee had recommended that the Government should conduct a detailed study of supplies made by BEL to Defence and other Government Departments during the last 3 years with a view to finding out as to how much profits or losses the Company has incurred on each of these contracts and also to find out that the Company had not made any un-reasonable high profits as monopoly supplier of equipments.

12. Government have stated in their reply that a Study Team of the Officers of the Department of Defence Production and Supplies had been deputed to conduct a study of supplies made by BEL to Defence and other Government Departments during the last 3 years. Details of major equipments common to Defence as well as other Government Departments supplied by BEL during the years 1984-85 to 1986-87 have also been furnished. According to the Government the Company has not made unreasonably high profit as monopoly supplier of equipments.

13. The Committee do not agree with the Government's view that BEL has not charged unreasonably high profit as monopoly supplier of equipments. They find from the details of major equipments supplied by BEL to Defence and non-Defence customers during the years 1984-85 to 1986-87 that the company earned profit to the extent of 32.1 per cent, 34.7 per cent and 39.6 per cent on some of the supplies made to Defence and as high as 51 per cent, 51.8 per cent and 52.2 per cent from non-Defence customers. The Committee, therefore, recommend that the Pricing Policy of BEL should be such as to ensure that the company does not make unreasonably high profits from Defence and other Government Departments as monopoly supplier of equipments.

D. Formulation of Pricing Policy

Recommendation Serial No. 18 (Paragraph 2.108)

14. While the Committee had agreed with the views of the Company that it might not be possible to lay down any uniform method on the basis of which the BEL could be asked to determine the price of its products but they were not convinced with the arguments advanced by the Company and by the Government that 'since Company is following in general the guidelines of the Government there is no need to lay down any detailed price policy'. They had, therefore, recommended that the Government should consider the feasibility of determining the pricing policy for its products which might take into account different selling conditions such as competitive selling, partial or total monopoly selling, selling only to Government Departments in the public interest etc.

15. In their reply the Government have stated that pricing norms to be adopted by public sector enterprises are covered by the guidelines issued by Bureau of Public Enterprises in December, 1968 and June, 1970. The objectives of these guidelines were that Public enterprises should be economically viable units and all out efforts should be made to increase their efficiency and establish their profitability at the earliest.

16. The Government have also stated that based on the recommendation of Committee on Public Undertakings contained in their 40th Report (Fifth Lok Sabha) that price disputes between Public Sector Undertakings *inter se* as well as between Government Departments and Public Undertakings should be settled within a time schedule to be prescribed in this behalf, Ministries and Public Sector Undertakings have been advised by BPE to take note of COPU's recommendation and take steps to finalise pending disputes either by referring them to the Pricing Committee or through direct negotiations. The Pricing Policy of BEL is thus stated to be based on these guidelines issued by BPE in December, 1968 June, 1970 and May, 1975.

17. The Committee are constrained to observe that Government have repeated the same argument as was advanced by them during their oral evidence before the Committee that the Pricing Policy of BEL is based on the general guidelines issued by BPE. The Committee feel that the guidelines issued by BPE on pricing lay down only the general criteria to be followed by the Public Undertakings in the matter of fixing prices of their products. The recommendation of the Committee was made after considering the above arguments of the Government. They would, therefore, reiterate their earlier recommendation that the Government should consider the feasibility of determining a sound and rational pricing policy of BEL taking into account different selling conditions such as competitive selling, partial or total monopoly selling, selling only to Government Departments in the Public interest etc.

E. Long-term plan for R&D

Recommendation Serial No. 24 (Paragraph 3.55)

18. Keeping in view the opinion expressed by Defence Production Secretary during his oral evidence before the Committee that "now the mechanism is under consideration of Government whereby 10 to 15 years perspective plan may be possible after a year", the Committee had reiterated the recommendation of earlier Committee (1971-72) that a perspective plan for research and development in BEL be drawn up for the next 10—15 years. The perspective plan should be reviewed every year in the light of performance and demand projections. The Committee had also emphasised that concerted efforts should be made by BEL to achieve break through in know-how and manufacture of electronic components of vital importance so that self reliance was achieved in meeting the Defence Supplies needs indigenously as far as possible, as also the requirements of electronics Industry as a whole.

19. The Government in their reply have stated that the R & D perspective plan of BEL is intimately tied up with the long term

perspective plans of Defence users. Once the Users long range 10—15 years plan is finalised, the Company will also formulate a 10—15 years R&D perspective Plan.

20. The Committee do agree that the R & D perspective plan of BEL is tied up with the long term perspective plans of Defence users but the Defence Production Secretary had categorically stated in evidence that "perspective Plan may be possible after a year or so as users are now coming up with their long term plans." Therefore, keeping in view the paramount importance of achieving self reliance in meeting the Defence Supplies needs indigenously, the Committee need hardly emphasise again that BEL should maintain a close liaison with the users so as to ascertain their long term requirements and draw up for the next 10—15 years a perspective plan for Research and Development.

CHAPTER II

RECOMMENDATIONS THAT HAVE BEEN ACCEPTED BY GOVERNMENT

Recommendation Serial No. 1 (Paragraph 1.60 to 1.65)

The Committee on Public Undertakings (1971-72) in their Third Report on the working of BEL recommended that rated capacity of plant should be fixed in terms of physical output as the value of production was liable to change. The Committee also reiterated the recommendation in their Twentyfifth Report (1972-73). In spite of this, the Committee are sorry to note that the rated capacity in terms of physical output has not so far been fixed by the Company in respect of Low Power and High Power Equipment Divisions in Bangalore and also in Ghaziabad Unit, though the Company is reported to have fixed production capacities in terms of physical output for the products manufactured in the Components and the Radar Divisions at Bangalore and for the opto-electronic devices produced at Pune Unit.

The Committee also find that in Ghaziabad Unit the Production capacity has been fixed only in terms of value. The Committee do not consider it as a reliable yardstick for measuring the capacity utilisation in view of inflationary trend in prices.

The Committee are informed that in response to the instructions of the Ministry to define production capacity in terms of "available standard hours output" the Company worked out in April, 1982 the production capacities of Equipments and Components Divisions at Bangalore to 34,00,800 hours and 43, 58,818 hours, respectively. While estimating the capacity in terms of "available standard hours output" the Company took into account the availability of only 1200 hours per direct worker per annum as against 2400 effective hours. On this basis the capacity utilisation during 1981-82 worked out to 72 per cent and 76 per cent respectively for the said two Divisions. The Committee are also informed by the Company that because of the situation obtaining in the Divisions, 1200 hours per operator per annum was the maximum attainable standard hours. The Company has further maintained that these 1200 standard hours are only the bench-mark for production and planning and were not to be treated as norms for rated capacity and in the event

of product mix factor being adverse in a particular year, it may be difficult to achieve even the 1200 hours bench-mark. In this connection, the Department of Defence Production have also supported the position maintained by the Company that "for the present utilisation capacity on the basis of standard hours per worker per annum adopted by the Company are considered realistic and matter can be reviewed later as and when better parameters become available.

During evidence, the representative of the Company contended before the Committee that it was not possible to fix rated capacity in terms of physical quantities of different types of equipments and that assessment of rated capacities in terms of single unit was fraught with inherent difficulties in equivalents for various products. The witness further stated that "it was not possible to do it in an engineering industry of BEL's nature due to changing pattern of production and improvements and modification needed from time to time." As regards the suggestion whether the question of fixing the rated capacity could be referred to some reputed Management Institute for advice, the Defence Production Secretary while agreeing in principle stated in his oral evidence "if there is any one who can suggest about the expert or the Committee can tell us, in principle I for one would be prepared to recommend to the Government that this exercise is worthwhile and let us have the capacity assessed". He further added "I am prepared for its being referred to anyone anywhere in India who can be trusted for secrecy".

To another suggestion that if the rated capacity in terms of physical output could not be fixed, could it be fixed in terms of standard man hours by taking into account the established production facilities. To this also the representative of the Company did not agree saving "rated capacity cannot be arrived at by simple arithmetic". The Chairman, Audit Board, however, has cited before the Committee the example of another similar major undertaking operating at Bangalore viz., Bharat Earth Movers Ltd., whose product mix envisaged originally was no longer the current product mix and the question arose how the rated capacity of that plant could be compared with reference to actual performance. For that purpose they first calculated the standard man-hours required for original product mix i.e., 890 pieces of equipment for which that particular plant was originally set up. On that basis the rated capacity of plant was worked out into standard man-hours. Then the time required for the current product-mix per piece was worked out and on that basis the current rated capacity was fixed. In short the capacity of the plant was first worked out into standard man

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hours to assess the current production and then it was related to actual performance.

While reiterating their earlier recommendation, the Committee stress that BEL should immediately undertake an assessment of the rated capacity either in terms of physical output or in terms of standard man hours on the lines of the example cited by Audit. The Committee are of the view that in the absence of the fixation of rated capacity on the basis of correct norms it is not possible to assess the capacity utilisation in the right perspective. The Committee also feel that the deduction of 50 per cent of the total effective available hours for purpose of working out the available standard man-hours per operator per annum is *prima facie* on the high side and is not acceptable as this is not based on any detailed and independent work studies. The Committee therefore recommend that the Government should appoint suitable Consultants or Expert Authority to determine the capacities for Companies such as BEL which could determine a yard-stick for assessing the capacity utilisation on scientific basis. The Committee also suggest that Government may also review the whole question of deduction of 50 per cent of the total effective hours for purpose of working out the available standard man-hours per operator per year with a view to arriving at a better parameter for the meaningful assessment of the production performance of the Company. While doing so, the Government may keep in view the experience of similar concerns elsewhere in India and abroad.

Reply of the Government

The Deptt. is in agreement with the view point of the Committee in regard to evolving a yard-stick for assessing the capacity utilisation on a scientific basis. In view of this, the Company on our advice appointed the National Institute for Training in Industrial Engineering. (NITIE), Bombay, to undertake a study on the capacity determination & labour productivity of the manufacturing facilities of the Company. Accordingly, NITIE, after carrying out a detailed study have submitted a report pertaining to capacity determination and labour productivity in the equipment divisions of BEL to the Company. This report is under examination. Based

on their recommendations and the methodology indicated for determining capacity of the equipment divisions, the Deptt. will issue suitable instructions|directions to the Company.

[Ministry of Defence, Department of Defence Production and Supplies O.M. No. 20(1)|87|D|(BEL) dated 26-8-1987.]

Comments of the Committee

[Please see paragraph 6 and 7 of the Chapter I of the Report]

Recommendation Serial No. 2 (Paragraph No. 1.66)

According to BPE guidelines issued in 1970-71, every undertaking was free to fix annual target of production so long as it was equal or near about to the rated capacity. However, if some undertaking wanted to lower the rated capacity it had to get prior approval of the Government therefor. This provides an opportunity to Government to satisfy itself whether the deviation from the rated capacity was justified. On enquiry whether the rated capacity of 2400 hours fixed by BEL was lowered to 1200 hours with the prior specific approval of Government, the Finance Director of the Company informed the Committee that "1200 hours fixed were agreed to by the Government.... It was done only once. Once it was agreed to by Government we are adopting it year after year". As per BPE instructions the Company had to seek prior permission of the Government. Again to a pointed question, whether the Company got approval of Government prior to reducing the standard man-hours capacity, the witness did not give an unequivocal reply. The Committee are therefore constrained to conclude that the Company has clearly violated BPE's instructions on the subject to which the administrative Ministry have also acquiesced by according approval subsequently without any deliberations or indepth study. The Committee consider it a clear case of lapse both on the part of Company and also the Ministry and express their displeasure for not following the BPE's guidelines by the Company as well as the Ministry in a vital matter.

In order to obviate recurrence of such lapses the Committee desire that BPE's guidelines on subject may be circulated by the Ministry again to all public undertakings under their control for their guidance and strict observance and any case of lapse coming to the notice of the Ministry should be appropriately dealt with.

Reply of the Government

The Defence PSUs have again been impressed upon to follow the instructions regarding fixation of rated capacity in their units.

[Ministry of Defence, Department of Defence Production & Supplies
O.M.No. 24(1)|87|D(BEL) dated 26th August, 1987.]

Recommendation Serial No. 3 (Paragraphs No. 1.67 to 1.69)

The Committee are concerned to note that the percentage utilisation of machinery in the Low Power Equipment Division and Radar Division at Bangalore has been declining steadily. The percentage utilisation in Low Power Equipment Division came down from 71 per cent in 1979-80 to 65 per cent in 1983-84. The position in the Radar Division is still dismal. There, the percentage utilisation of machinery has come down from 61 per cent in 1979-80 to 52 per cent in 1983-84. Though the utilisation of machinery is reported to have improved in Radar Division during the last two years by transferring certain projects from other two Divisions, the Committee have found that in spite of transfer of some projects from other Divisions to these Divisions, the machinery utilisation has not improved but has come down from 54 per cent to 52 per cent. In this connection, the representative of the Company also admitted that "in spite of the fact that project transferred from other Divisions were able to utilise some of the machines, the average was pulled down by the fact that certain machines were practically idle." It was also admitted by the representative of BEL that "as long as FC Radar Production was not utilising something like 12 major machines to the full extent, the percentage utilisation of machinery will continue to be low."

In the Ghaziabad Unit, the position is somewhat better but there also the utilisation of machinery has come down from 65 per cent in 1979-80 to 63 per cent in 1983-84. It was 68 per cent in 1981-82 and 66 per cent in 1982-83. The idleness of machinery in the Equipment Division at Bangalore and Ghaziabad Unit is reported by audit to have ranged from 35 to 48 per cent in 1983-84 and the main reasons advanced therefor are want of work, want of operator and electricity/mechanical break down. Till the end of March, 1984, 8 machines costing Rs. 11.84 lakhs were idle for varying periods of six months and above in Bangalore and Ghaziabad Units. In the Components Division, at Bangalore, the utilisation of machinery had not been ascertained so far.

The Committee have observed from the Audit Report that in the Components Division, for 7 out of 14 products, the targets fixed were lower than the capacity established. The Committee therefore, recommend that the Company should take immediate action to ascertain the extent of utilisation of machinery in the Components Division and take concerted and effective measures for utilisation of all the machines fully to their established capacity and in no case the machines be allowed to remain idle, partly or fully.

Reply by the Government

The Company has taken steps to improve the capacity utilisation of Key Machines as well as General Purpose Machines by classifying them into categories such as (a) High Cost Machines which include CNC machines, (b) Primary Production Machines, and (c) Secondary Production Machines. Machine utilisation reports are being constantly monitored for machines under categories (a) and (b) above. Any major shortfalls in utilisation are reviewed constantly by Divisional Management. In the Components Divisions, the machines coming under the general machines category are being watched for proper utilisation by introducing machine utilisation tickets. The Department has noted the procedures adopted by the Company to ensure maximum utilisation of machines. The matter is being monitored and reviewed by the Department at a high level every quarter.

[Ministry of Defence, Department of Defence Production & Supplies
O.M. No. 24(1)|87|D(BEL) dated 26th May, 1987.]

Recommendation Serial No. 4 (Paragraphs No. 1.70 to 1.72)

The Committee are also informed by the Company that the machinery utilisation with the Radar Division has been going down from 1978-79 because FC Radar production started tapering off from that year onward. Even though the Company has established capacity in terms of plant and machinery for an annual production of certain quantity of 'X' type Radars, the manpower engaged was restricted to an annual production of 75 per cent of the quantity leaving the machine capacities unutilised. The Committee also note that in Radar Division, the capacity set up initially in 1967-68 for production of 'X' type Radars was increased to double the original quantity in 1971-72, at the instance of the Government, by installing additional facilities at estimated cost of Rs. 58-lakhs. However, the expected orders for 'X' type products did not materialise. The additional man-power required for production was not deployed and production capacity was

restricted to original quantity. In this connection, the Company has also stated in April 1983 that apart from continuing the certain existing production line, non-radar item required for defence were proposed to be taken for production from 1983-84 onwards. While this will engage fully the Assembly capacity in the Division some fabrication capacity upto 25 per cent might not be utilised because of non-utilisation of some of the high cost machinery specially meant for production of 'X' Type Radars. It is also reported that the Company could not take up the development of a successor to Radar 'X' as the issue was engaging attention of Defence Services, since 1968. The production of 'X' Type Radar at BEL ceased from January 1983.

The Committee take a serious view of a large number of machines lying idle in which a huge capital has been invested which cannot be allowed to remain blocked. Further, if the machines are kept idle, it will have its own reflection on the prices, production and also on the payment to labour for the working hours. On the one hand the cost per man-hour would go up, on the other the value of the machines depreciates with the passing of each day. The Committee therefore, recommend that financial loss suffered by the Company during the last 5 years in terms of production due to the machinery remaining idle, should be quantified and the Committee may be apprised of it. The Committee may also be informed of the steps proposed to be taken to minimise the idle capacity of machines. In this connection, the Company/Government should also examine the feasibility of disposing of such of the machines as are not going to be made use of in future. The Committee would like to be informed of the action taken in this regard within next six months.

During evidence, when enquired whether the idleness of the machinery and established capacity were being reported to the Board, the representative of the Company admitted that "we are not reporting down the idle capacity in each work centre. We informed the Board about the Radar Division". The Committee recommend that the idle capacity of machines in all the units of BEL should be quantified and reported to the Board regularly after every six months alongwith the reasons therefor and also the measures taken to improve the utilisation of machinery etc. so that the Board should have the opportunity to look into the problem in all its ramifications and take suitable action where necessary. The Committee also desire that the Ministry should also specially monitor the utilisation of machinery in the Company so as to ensure that there is no slackening of efforts at any time at any level. Coordinated efforts should also be

made for utilisation of the idle machine capacity to alternative uses. The information with regard to idle capacity should also be brought out in the Annual Report of the Company.

Reply of the Government

The Company had been directed to enquire into the financial loss suffered during the last five years in terms of production due to machinery remaining idle. The relevant details are given in the Annexure (reproduced below). The Company has, however, agreed to the recommendation of the Committee that the idle machine capacity in all its units would be quantified and reported to the Board regularly after every six months. In addition, concerted effort is being made by the Company for utilising the idle machine capacity for alternative purposes. The following steps are proposed to be taken to minimise idle capacity of machines:—

- (i) Regular drill on preventive maintenance will be strictly followed.
- (ii) Steps are being taken to reduce employees absenteeism so that operators are available to operate the machine in both the shifts.
- (iii) The machines which are very old and have lost their accuracy are either being disposed of or used as secondary machines (when retained) for producing parts where lower accuracy is accepted.
- (iv) Steps have been taken to transfer some of the idle machines to other new manufacturing divisions and units of BEL. It may be stated that from the Bangalore Unit alone more than 45 machines have been transferred to the other new units of BEL and similarly from the Radar Division 15 machines have been transferred to other divisions within the Bangalore Unit.
- (v) The Company has taken steps to augment in-house power generation capacity to ensure uninterrupted power supply to the machines.
- (vi) High cost machines like CNC machines are separated from the low cost machines and given a separate cost centre so that concentration can be given for the high cost machines for better utilisation.

- (vii) All future investments, if at all made, will be such that the machines can be utilised optimally even with a changed product-mix.

The Department agrees with the recommendation of COPU to specially monitor the utilisation of machinery in the Company and suggest proper utilisation of idle machine capacity. However inclusion of the information in regard to idle capacity in the Annual Report of the Company may not be insisted upon as the information pertaining to the capacity of a Defence PSU such as BEL is of sensitive nature. In fact, the Company has been obtaining exemption from the Company Law Board from disclosing information required as per Schedule VI, Part II of the Companies Act. This has also been accepted by the C&AG.

[Ministry of Defence, Department of Defence Production & Supplies
O.M. No. 24(1)|87|D(BEL) dated 26.8.87.]

Annexure to reply of Government to Recommendation S. No. 4

In view of the fact that the drop in machine utilisation was significant mainly in the Radar Division of the Bangalore Unit during the five year period from 1979-80 to 1983-84, as reviewed by COPU the financial loss suffered by the Company due to the tapering off in Fire Control Radar Production and the delays in introduction of successor Radar has been worked out.

The optimum value of machine utilisation when the FC Radar was in regular production for 1978-79 was 66 per cent. Due to lower machine utilisation during the subsequent years the variation from the optimum has been calculated. The ratio of this variation with respect to the actual machine utilisation during that year multiplied by the production value achieved during that year indicates a notional financial loss in production suffered by the Company due to machinery remaining idle. The details are as follows:—

S. N.	Description	1979-80	1980-81	1981-82	1982-83	1983-84
1.	Value of Production (Rs. in lakhs)	1643	927	1956	1370	2062
2.	Machine Utilisation (in percent)	61	59	62	54	52
3.	Optimum machine utilisation (in percent)	66	66	66	66	66
4.	Decrease in machine utilisation from the optimum during the year expressed as ratio	$\frac{5}{61}$	$\frac{7}{59}$	$\frac{4}{62}$	$\frac{12}{54}$	$\frac{14}{52}$
5.	Notional production loss due to lower machine utilisation (Rs. in lakhs)	$\frac{5 \times 1643}{61}$ =134.7	$\frac{7 \times 927}{59}$ =110.0	$\frac{4 \times 1956}{62}$ =126.2	$\frac{12 \times 1370}{54}$ =304.4	$\frac{14 \times 2062}{52}$ =555.2

Recommendation Serial No. 6 (Paragraphs Nos. 2.14 to 2.15)

The Committee have also observed that the targets fixed for the year 1978-79 to 1980-81 were less than the targets fixed for the year 1977-78 leaving thereby a lot of unutilised capacity. Even these derated targets could not be achieved by the Company.

According to the Company, some of the common reasons for the shortfall in production during all these years were delays in development of product, delays in obtaining bulk production clearance, initial teething trouble in productionisation of newly developed products, delays in obtaining supply of components from indigenous foreign suppliers, etc. The Committee do agree that some of the factors could not be predicted with any degree of certainty but a few of them could have been foreseen by the Company at the time of fixing the targets. The shortfall in targets could have been avoided had the Company made adequate arrangements for proper monitoring and follow up of production. Therefore, in Committee's view the preliminary factor responsible for the shortfall in production targets year after year was that the Management did not fix up realistic targets after assessing all relevant factors. The Committee suggest that the Company should streamline their machinery for target setting so that the production targets set for various Divisions are more realistic than what they have been in the past. The Company should also ensure that once the targets are fixed every effort should be made to achieve them.

Reply of the Government

The Company has submitted as follows:

"Though the targets fixed for the years 1978-79 to 1980-81 were less than the targets fixed for the year 1977-78 for the Equipment Divisions of the Bangalore Unit Except for the year 1980-81 (due to the 77 day old strike) the achievements during the years 1978-79, 1979-80 for the Low Power and High Power Equipment Divisions and for the year 1978-79, for the Radar Division were higher than their achievements during the year 1977-78.

For the Components Division of the Bangalore Unit, the targets and achievements for the years 1978-79 to 1980-81 were higher than that for the year 1977-78.

In the Ghaziabad Unit, except for a marginal decrease in target for 1978-79, the targets for 1979-80 and 1980-81 and the achievements for 1978-79 to 1980-81 were higher than that for 1977-78.

The Company would like to submit that shortfall in targets achievement is due to various reasons already brought to the notice of the COPU, such as delays in development of product, delays in obtaining bulk production clearance from the user, initial teething trouble in productionisation of newly developed products, delays in obtaining supply of components from indigenous/foreign suppliers. As accepted by the COPU, some of the factors could not be predicted. Though the Company did make every effort to realise the targets by proper monitoring and follow-up of production, shortfall persisted in spite of the best efforts of the Company.

The Company has however noted the COPU's Recommendations for target setting so that the production target set for various divisions are more realistic than what they have been in the past. The Company would ensure that once the targets are fixed every effort will be made to achieve them."

The Deptt. has noted the Company's submission about setting up realistic production targets and is also ensuring that targets once fixed are achieved. The Deptt. also monitors the achievements vis-a-vis targets set by the Company at a high level periodically.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1)|87|D|(BEL dated 26th May, 1987.)

Recommendation Serial No. 7 (Paragraph No. 216)

The Committee note that to minimise the gap between the targets and achievements, the Company has taken certain important steps which include in-house power generation, better planning at the developmental stage, bifurcation of large divisions into small compact divisions, decentralisation of computer facilities to provide each division its own data based unit etc. The Committee hope that with these steps the Company will not only be able to maintain the progress achieved in 1984-85 by Low Power and High Power Divisions at Bangalore but will bring about a marked improvement in the production performance of all other Divisions of the Company.

Reply of the Government

The Company has submitted the following:

"The Company have noted COPU's observations that to minimise the gap between the targets and achievements the Company have

taken important steps which include in-house power generation, better planning at the development stage, bifurcation of large divisions into small compact divisions, decentralisation of computer facilities to provide each division its own data base etc. The gap between targets and achievements has been further minimised. This can be observed from the data furnished below for the production year 1985-86 regarding the value of production for the various manufacturing divisions.

	Target (Value of Rs in lakhs)	Achieved	Percentage of achievement w.r.t. target
Low Power Equipment Division	2,962.41	3,138.49	105.9
Digital Communication Equipment Division	421.59	430.83	102.2
High Power Equipment Division	3,659.39	3,723.29	101.8
Reader Division	2,403.81	2,404.29	100.0
Electron Tube Division	3,425.30	3,500.61	102.2
Semiconductors Division	2,017.20	2,189.53	108.5
Ghaziabad Unit	4,366.34	3,990.11	91.40

It would be seen that all the divisions of the Bangalore Unit have fully achieved their targets and the Ghaziabad Unit has made an achievement of 91.4 per cent. The Company expects this trend to continue."

The supplies made against the targets set are closely monitored periodically by the Department.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1) |87|D(BEL) dated 26th May, 1987.]

Recommendation Serial No. 8 (Paragraphs 2.44 to 2.47)

The Committee have noticed that in the Equipment Divisions no norms were laid down by BEL for rejections so as to assess the quality of performance and to fix responsibility for defective work. Reasons for rejections have also not been analysed with a view to taking remedial measures. No monthly reports were submitted to the higher Management on the quantum of rejections, the labour and material costs involved therein, etc. The BEL has admitted in

their written reply that "while no norms as such have laid down for rejections but a review is undertaken during the course of production to ensure that there are no rejections of equipments as such at the end of production process."

In the Component Divisions also, the norms were fixed only for 4 out of 14 products and that too for the assembly stage of manufacture. Even for fabrication of parts required for assembly of components no norms were fixed. In the case of other two important components viz. Germanium Semi-conductor and Ceramic capacitors, the actual rejections were also more than the norms fixed by the Company.

The Committee are also informed that the high process rejections compared to the collaborators' works levels were due to inefficient manual method of dispensing chemicals, manual handling of job and adoption of higher quality of levels whereby the Company markets only Grade 'A' quality type as against lower 'B' & 'C' grades passed and marketed by collaborators.

The Committee are not convinced of the reasons now advanced by the Company for high rejections of raw bulbs and tube processing. The Committee feel that while fixing the norms the Company must have taken into account all the relevant factors and as such there can be no justification for the actual rejections being higher than the norms fixed. The Committee desire that the exact reasons for excess rejections should be identified by an expert independent body within six months of the presentation of this report and suitable remedial measures taken to bring down the rate of rejections within the permissible limits.

Reply of the Government

As desired by the Committee, on the advice of the Department, the Company had referred the problem to the Statistical Quality Control Unit (SQC Unit), Bangalore, a Division of the Indian Statistical Institute for undertaking a study pertaining to rejections in the various operations in the TV manufacturing division. The report from the Statistical Quality Control Unit, Bangalore has been received on 11-8-87 and is under examination.

Based on the report of the SQC Unit, the Company would be directed to take suitable action to see that the rejections are maintained within the permissible limits.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1)|87|D(BEL) dated 26.8.87].

Recommendation Serial No. 9 (Paragraph No. 2.48 & 2.49)

The Committee have also found that the process rejections of raw bulbs came down from 11.06 per cent in 1978-79 to 5.41 per cent in 1979-80. It started rising gradually, thereafter and in the year 1983-84 it was as much as 6.52 per cent. To a specific question as to why the Company was not able to maintain even the level of 5.4 per cent which the Company had reached with certain drawbacks like manual handling, inefficient method of dispensing chemicals, quality problems, etc. the CMD admitted during evidence that "this happens due to inefficiency and we are trying to improve to the best of our ability."

To another question that even in tube processing actual rejections rates were higher than the norms fixed by the Company, the representative of the BEL stated that "norms fixed in that area were rather ambitious." He also admitted that "rejections levels are higher in our case compared to other countries." The Committee feel that while fixing the norms the Company has not taken into consideration the reality. The Committee see no reasons why the Company should not be able to sustain even the level of rejections achieved in 1978-79 in spite of certain drawbacks. The Committee recommend that on the basis of experience of working and with reference to norms obtaining in other enterprises producing similar products BEL should fix appropriate norms based on realities and also tighten its control measures to see that the percentage of rejections does not exceed the norms.

Reply of the Government

In recommendation S.No. 8 it has already been submitted that the Company have engaged the Services of Statistical Quality Control Unit, Bangalore, a Division of Indian Statistical Institute. The Statistical Quality Control Unit has completed its study. After appropriate norms for rejections based on recommendation of SQC are fixed the Company will be advised to adopt suitable control measures to ensure that the percentage of rejections does not exceed the norms.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24 (1) /87/D (BEL) dated 26th May, 1987]

Recommendation Serial No. 10 (Paragraph No 2.50)

In this connection, the Committee would like to draw the attention of BEL/Government to the recommendations of the earlier

Committee on Public Undertakings contained in the 67th Report (4th Lok Sabha) on Production Management in Public Undertakings emphasising that the public sector enterprises should evolve some permissible limits for rejections so that whenever rejections go beyond that limit causes should be analysed and remedial measures taken. The Committee had also recommended then that all public undertakings should lay down norms for actual rejections of each item or category of items so that the Management becomes aware of the categories of rejections well in time and devise remedial measures before it is too late. The Committee desire that in pursuance of this recommendation, the Company should also fix norms for all its products produced in Equipment Divisions, Component Divisions and other Divisions.

Reply of the Government

The Company has submitted as follows:

“The Committee’s recommendation to fix norms for rejections for all its products produced in Equipment Divisions, Components Divisions and other Divisions has been noted by the Company. It may be submitted that for the Equipment Divisions, no rejection norms for the products can be fixed as the products (Radio and Radar equipment) are not allowed to be rejected wholly in the final stage. Norms for rejection and re-work at various stages of the production process will be attempted instead. The Company will make all efforts to fix rejection/re-work norms wherever practicable and amenable for fixation at appropriate stage of production and which should also be capable for easy monitoring so that remedial measures could be taken in time.”

The Department would ensure through periodical reviews that the Company abides by the recommendations of the Committee on Public Undertakings.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1)|87|D(BEL) dated 26th May, 1987.]

Recommendation Serial No. 12 (Paragraphs Nos. 2.63 to 2.65)

As far back as in April, 1972, the Committee on Public Undertakings (5th Lok Sabha) has recommended in their 3rd Report that BEL should introduce standard costing so that the performance of the Company could be judged against the set standards. In pursuance of this recommendation, the Company is reported to have introduced standard costing for two products viz., Receiving Valves

and Germanium Semi-Conductor from April, 1973 with the eventual extension of the system to other items to be considered after assessing the results. The standard costing was discontinued in 1974-75 "temporarily till the prices returned to reasonable suitable levels." The standard costing have neither been re-introduced nor the approval of Government has been obtained by BEL for its permanent discontinuation.

The Company is also reported to have informed Audit in December, 1979 that the practical utility of standard costing was doubtful in an environment of erratically changing prices. The Company has advanced two main reasons for the discontinuation of costing system just after one year of its introduction and there were steep and violent hike in oil prices from April, 1973 to 1983-84 and fluctuation in rupee value of foreign currencies which adversely affected BEL's operations as Company uses 80 per cent imported materials as against only 20 per cent indigenous materials. These factors therefore, rendered the operation of standard costing in monetary terms difficult and the Company had thus no option but to limit it to qualitative aspect only. The environment of erratically changing prices being a universal phenomenon, the Committee see no justification for BEL to discontinue the system of standard costing just one year after its introduction in Components Division, especially when other public undertakings have not given it up on the plea of changing prices. Moreover, standard costing is not vitiated by large price variations which could be explained as such. On the other hand, the system of standard costing brings out other controllable variances which are very useful for management control.

The Committee are also informed that the Company is examining afresh the question of reintroducing the standard costing taking into account the price situation. In this connection, the representative of BEL during his oral evidence also admitted that "since last year, things are slightly better and we may be able to attempt it once again. We have every intention of trying it and if it is feasible, we will try to expand it." The Committee, therefore, recommend that BEL should take urgent steps to reintroduce the standard costing so that performance of the Company could be watched against the set standards.

Reply of the Government

In line with the wishes of the Committee, the Company had been directed to initiate steps to reintroduce standard costing system

first in one product division and depending on its success to extend to other areas. Accordingly standard costing system has now been introduced in the TV picture tube division in the Bangalore Complex covering 20 inch and 14 inch TV picture tube production. Depending on its success, the Company would be directed to reintroduce standard costing system in other divisions also.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1)|87|D(BEL) dated 26-8-1987.]

Recommendation, Serial No. 13 (Paragraph No. 2.66)

The Committee are distressed to point out that whereas the Company took the vital decision to discontinue the standard costing system, they had not bothered to obtain prior approval of the Government in this regard. In fact, the Finance Director of BEL admitted during evidence that "we intimated to them (Government) only when it came out in the Audit Report and not earlier . . . frankly speaking it was not brought to the notice of the Government." The Committee feel that when the costing system was specifically introduced in the Company at the instance of the Government, the Company ought to have taken approval of the Government before its discontinuation. The Committee, therefore, desire that Government should issue specific instructions and guidelines to the Company in this regard so as to avoid the recurrence of such a lapse in future. The Government may also direct the Company to implement and see that these recommendations are implemented in letter and in spirit.

Reply of the Government

In accordance with the wishes of Committee, the Company has been re-instructed to adhere to the laid down norms so as to avoid recurrence of such a lapse in future.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1)|87|D (BEL) dated 26th May, 1987.]

Recommendation, Serial No. 14 (Paragraph Nos. 2.81 to 2.83)

The Committee find that in the manufacture of various components, the Company uses precious metals like gold, platinum, silver nickel etc. either in the pure form or in the form of alloys, powder, suspension, solution, salts, wires, strips etc. Gold Potassium Cyanide used in gold plating was being manufactured and supplied by sub-contractor out of gold issued by Reserve Bank of India on Gold Control permits as well as out of gold recovered by the Company

from waste solutions/scrap and issued to sub-contractor. The value of the gold Potassium Cyanide for gold plating of semi-conductors used during the years 1980-81 to 1983-84 worked out to more than Rs. 410 lakhs (at the average price of Rs. 145 per gram). Similarly, the value of the other precious metals used in the manufacture of components during 1980-81 to 1983-84 was about Rs. 71 lakhs.

The Committee have also been informed by Audit that the Company is not conducting any reconciliation between the total input of precious metals issued for production with the output i.e. actual contents in parts produced/plated and the quantity recovered from the waste solution, rejected parts, whereby the Company is not ensuring against excessive use of metals, abnormal wastage, etc.

In this connection, the Committee would like to draw the attention of the BEL/Government to the instructions issued by BPE to all public sector undertakings in August, 1974, emphasising that in the matter of use of precious metals and chemicals, adequate care must be taken for laying down norms for consumption and process wastage. There should also be proper management control to ensure that important data about consumption/wastage of precious metals and chemicals is reported to the higher Management.

Reply of the Government

The attention of the Company has once again been drawn to the BPE guidelines issued in Aug. 1974. The Company has also taken adequate care for the use of precious metals and chemicals used in the plating processes. It has established practical physical controls such as (a) issues according to established standards, (b) maintenance of records of issues and recovery, (c) details of scraps processed and gold recovered and (d) responsibility entrusted to senior level executives. The Company has taken appropriate steps for laying down norms for consumption and process wastage in the use of precious metals and chemicals. Company has taken further steps to ensure proper management control so that important data about the consumption/wastage of precious metals and chemicals is reported to the higher management.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1)87/D (BEL) dated 26th May, 1987.]

Recommendation Serial No. 16 (Paragraph Nos. 2.101 to 2.106)

The Committee note that the major items of equipments produced by BEL in which the Company enjoys almost a monopoly are sold to Defence and other Government Departments. In the sale of components produced by the Company it faces competition from private sector and imports.

The Committee have also noticed that so far the Board of Directors of the Company have not formulated any pricing policy for their products. The pricing policy followed by BEL is on Fixed quotations and not on cost plus basis. The selling prices are reviewed and revised by BEL from time to time in the light of new developments but no set periodicity for this purpose has been prescribed.

During evidence, the Committee were informed by the Defence Production Secretary that the Government guidelines on pricing were being followed by BEL who have not felt any need to lay down different policies in this regard. The BEL has also not sought any special concession or relaxation from the Government guidelines.

On enquiry whether BEL has been charging a reasonable price for its products supplied to Defence and other Government Departments, the Department of Defence Production and Supplies have informed the Committee that the prices quoted are reasonable and are also subject to negotiations by the concerned Indenting Department. In the case of components supplied to Civilian Departments, the Company faces stiff competition, from private sector/imports and prices are fixed from time to time on the basis of cost of production, capacity of the market to bear, competition from the private sector, imports etc. In so far as supplies to Defence Services are concerned, all those items which are still under development, the selling prices of BEL compare favourably with the landed cost of similar equipments to be imported. The Company generally quotes fixed price based on estimates/actual cost experience etc. which includes an *ad hoc* provision for escalation in the cost of material and labour during the projected delivery period. Therefore for this purpose the Company initially submits a rough estimated cost through the budgetary quotations which are later firmed up after scrutiny and negotiations by the Price Negotiations Committee.

The Committee are also informed that when underselling (i.e. quoting at less than international price) is resorted to by BEL, it

is done in the overall interest of the country's Defence budget after ensuring an adequate return on investment and a payment of 12 per cent dividend to Government on its capital.

On being pointed out that BEL suffers huge losses on some of the consumer electronics products sold in the open market but the loss is more than made good through the profits on products supplied to Defence and other Government Departments, the Defence Production Secretary then promised that "I will look into this aspect myself." As the Defence allocations do not come under the budget review, the Committee desire that a special care should be taken by the Ministry to ensure that they are not being over-charged by BEL.

Reply of the Government

The Company with whom this issue was taken up has stated as follows:—

"The Company follows the guidelines laid down by the Government on pricing policies of Public Enterprises in Office Memorandum No. BPE/46/Adv(F)/68/25 dated 27-12-1968 and BPE No. 1(76)/Adv(Fin)/70 dated 18-6-1970. In the case of equipments, the customers, assess the prices quoted by the Company (since they are aware of the worth of the equipments in the International market) before accepting them. Most of BEL's major equipments sold to the major customers have been at well below with landed costs or world prices of similar products. The purchasing agencies are well aware of the price trends and negotiate the prices based only on such market information.

Wherever BEL has been allowed to export defence equipment, it has been able to realise prices much higher than those obtained from Indian Defence Customers. Some examples are shown below:—

Equipment	Applicable year of supply	BEL Price to Defence	International price in Indian Rupees.	Base for International price.
100W Linear Amplifier	1981-82	Rs. 32,130	Rs. 57,250	BEL's export
HB Set (LHP-219)	1980-81	Rs. 26,570	Rs. 57,475	BEL's export.
F.C. Radar	1982-83 1978-79	Rs. 45,50,000	Rs. 74,04,000	BEL'S export.
Cymbeline Radar	1985-86	Rs. 72,40,000	Rs. 79,22,000	Estimated price payable by Army. if imported from licensor.

This clearly establishes the reasonableness of the prices charged by BEL to the Indian Defence customers.

Whether a profit level is high or low is not to be judged with reference only to the sale value but with reference to the capital employed. This is particularly true of BEL and other defence units which are often asked to undertake high investment—low turnover projects on strategic considerations. The Company agrees that the losses suffered by it on some of the consumer electronics products sold in the open market is offset by the profits made on other products (both components sold to outside parties and equipments sold to Defence and other Government Departments) but this is not because of any overcharging but due to their scale economics being better placed, by international standards."

The Department has studied the Company's submission and may state that by and large the prices quoted by BEL are reasonable. The prices quoted by the Company are subject to negotiations by the concerned Indenting Department. BEL's budgetary quotations are firmed up through negotiations by a Price Negotiating Committee. However, the Ministry has noted the COPU's desire that special care should be taken by the Ministry to ensure that they are not being overcharged by BEL.

[Ministry of Defence, Department of Defence Production and Supplies O.M. No. 24(1)87/D(BEL) dated 26th May 1987.]

Recommendation Serial No. 19 (Paragraph Nos. 2.114 & 2.115)

The Committee note that as on 1st April, 1985 the pending orders with the Company were of the order of Rs. 41,937 lakhs out of which as much as Rs. 34,151 lakhs related to Defence Departments and Defence Undertakings. These orders, according to the Company, are expected to be liquidated in a period of 2-3 years.

The Committee also find that as on 1st April, 1982 the cases of slippages in delivery ranging upto 4 years has taken place in respect of orders valued at Rs. 1,509 lakhs, as brought out in the Audit Report. The Committee feel that slippages in the delivery of equipments to the Defence Services will not only affect their present sensitive Defence Plans but will also have adverse effect on the future delivery of equipments. Similarly, for other civilian Government customers also, the slippage will affect the implementation of their plan programmes for commissioning of equipments. The Committee, therefore, recommend that the Company should make all out efforts

to keep up delivery schedules of the equipments especially those relating to Defence and other Government Departments.

Reply of the Government

The Company has stated that it has noted the COPU's observations regarding all out efforts to be made to keep up the delivery schedules of the equipments especially those relating to Defence and other Government Departments. The Company has been taking steps to fix realistic targets of production and delivery schedules based on customer priorities after detailed discussions with them. The performance of the Company with reference to targets and achievements in production during 1985-86 in its manufacturing Divisions in Bangalore and Ghaziabad has been brought out in the following table:—

Division	(Value in Rs. lakhs)		
	Target	Achieved	%achievement
Low Power Division	2962.41	3138.49	105.9
Digital Communication Equipment Division	421.59	430.83	102.2
High Power Equipment Division	3659.39	3723.29	101.8
Radar Division	2403.81	2404.29	100.0
Electron Tube Division	3425.30	3500.61	102.2
Semiconductor Division	2017.20	2189.53	108.5
Ghaziabad Unit	4366.34	3990.11	91.4

It can be observed that there is cent percent achievement with respect to targets in all the production units of the Bangalore Unit.

[Ministry of Defence, Department of Defence Production and Supplies O.M. No. 24(1)|87|D(BEL) dated 26-5-87]

Recommendation Serial No. 21 (Paragraph Nos. 3.50 to 3.52)

The Committee regret to note that although the R & D activities of Bharat Electronics Limited commenced at the Company's Bangalore Unit in 1956 and at Ghaziabad Unit in 1974 and that the Committee on Public Undertakings had recommended as far back as in 1972 that a perspective plan for R & D should be drawn up for the next 10—15 years, no serious action was taken by the Company on

the recommendations of the Committee. The Committee find that only in April, 1982, the Board of Directors formulated the first detailed policy on R & D activities and in September, 1983, R & D project profile plan for only 3-4 years (as against 10—15 years plan as suggested by the Committee on Public Undertakings or 7—10 years plan as considered by the Board at its meeting held in April, 1982) was approved by the Board. The Committee are also constrained to observe that the Company did not maintain any proper record of the R & D projects taken up, successfully developed and productionised. The Committee have a definite feeling that R & D activities of the Company lacked proper directions for over two decades and were carried on in an *ad hoc* if not perfunctory manner. The Committee take a serious note of this neglect in the vital area of R & D activities of a Company like BEL has been primarily set up for meeting the defence needs of the country.

The Committee have also observed that by the end of March, 1984, 38 projects were abandoned after incurring an expenditure of Rs. 100.88 lakhs for reasons like lack of conformity to specifications, changes in Users' requirements and non-materialisation of expected orders etc. Similarly, upto March, 1984, 42 projects successfully developed at a cost of Rs. 243.80 lakhs could not be productionised because of technical obsolescence, non-materialisation of anticipated orders and competition from other manufacturers of equipment. The Committee express their serious concern about this seemingly infructuous expenditure in the face of the fact that R & D activities of BEL have been of limited use and the progress for the development of R & D Unit has been tardy and far from satisfactory.

The Committee have also noticed that the total time taken from 'go ahead' to the date of receipt of the bulk production clearance ranged from 52 to 116 months and the time taken by the Company for the submission of prototypes, modifications, etc. ranged from 36 to 57 months and the time taken by users for approval of specifications, conducting of trials etc. ranged from 13 to 59 months. This, according to audit has resulted in huge cost over-runs ranging from 10 to 967 per cent in 35 cases and inordinate time over-run of more than 4 years in 14 cases. In view of this inordinate time over-run that has taken place in the development of the certain products, the utility of the equipment under development has obviously become doubtful because of high obsolescence rate in the Electronics.

industry. The Committee deplore this huge cost and time overruns and are of the view that this could have been avoided or drastically minimised if there had been close and regular monitoring both at the Company and Ministry levels. In this connection the Defence Production Secretary has also admitted during his evidence that "the mechanism of monitoring of R & D Projects was not satisfactory". The Committee wish to stress that R & D problems should be attended to promptly and tackled promptly to achieve self reliance in technology especially when BEL is entrusted with the responsibility of meeting almost the entire requirements of Defence Services for communication equipment and some highly sophisticated Broadcast Transmitters, TV Satellite Receivers and Microwave Equipment and Systems. The Committee therefore, recommend that R & D Department of BEL should be strengthened adequately and its work monitored closely at the highest level so that it becomes a more effective instrument of progress. In this connection, the Committee would also like to reiterate the recommendation of the Committee on Public Undertakings (1971-72) that R & D of BEL should work in close coordination with CSIR, Electronic Commission, R & D Organisation for development of Electronics and Radar and other related research laboratories in the country so that a concerted and coordinated approach could be made so as to avoid duplication of research effort, reduce cost of production and above all lay a sound technological base for the electronic industry in India.

Reply of the Government

The Perspective Plan for BEL's R & D has been tied up with the Defence Plans of requirement for equipments. Major Defence Plans which were used for guiding the perspective were the Plan AREN and the Plan ADGES. The initial requirements projected for the ADGES Plan were taken up for planning the Ghaziabad facilities and the Development & Engineering requirements, but had to be changed when there was a sudden change in the user requirements of the High Power Static Radars and Mobile Radars as well as of Communication Equipments. However, BEL maintains close coordination with the Defence Services and has paced its R & D Plans to match with the projected requirements. Due to the inherently changing nature of Defence Perspectives, a long term R & D Plan of 10

to 15 years in the sophisticated field of electronic equipment is beset with difficulties.

Regarding non-productionisation of certain projects, considering BEL as a commercial Company, it has to react to situations as they emerge. Considering the scale of operations of BEL, such instances of non-productionisation have been relatively small and also possibly unavoidable considering the fast changing nature of the electronics industry. It is pointed out that against a revenue expenditure of around Rs. 80 Crs. for R & D incurred since inception till end March 1985, the value of production of such developed products has been of the order of Rs. 660 crores. The R & D expenditure incurred in a few abandoned projects should be viewed in the total perspective of the benefits accrued if the Company is to retain its sense of success in pioneering R & D activities.

Government has taken several steps to reduce the delays in getting bulk production clearances. A Technical Coordinating Authority (TCA) with its Advisory Committee is appointed to progress each development project against Qualitative Requirement issued by Service Headquarters. The Technical Coordinating Authority (TCA) meets as and when required to monitor progress like User Trials, technical evaluation, maintenance evaluation till the free flow production of equipment is achieved. The responsibility of bulk production clearance has also now been entrusted to the TCA.

The Company has noted the COPU Recommendations that R & D Department of BEL should be strengthened adequately and its work monitored closely at the highest level so that it becomes a more effective instrument of progress.

The Company has also noted the Committee's observations that R & D of BEL should work in close coordination with CSIR, Electronics Commission, R & D Organisation for Development of Electronics and Radars and other related Research Laboratories in the country.

A list of the products successfully developed/under development by BEL in active association with such organisations is given below:—

Organisation	Products
1. Electronics & Radar Development Establishment, Bangalore	TIDEX, AES, INDRA, I & II MUFAR
2. Defence Electronics Research Laboratory, Hyderabad.	IFF, EW Systems, CIPHER
3. Instruments Research & Development Establishment, Dehra Dun	Passive Night Vision Binoculars & Goggles, Laser Range Finders.
4. National Physical & Oceanographic Laboratory, Cochin	Sonars, Toted, HUMVAD, Transducers
5. Bhabha Atomic Research Centre, Bombay	Image Converters
6. Indian Institute of Science, Bangalore	Mg MnO ₂ Batteries
7. Indian Space Research Organisation, Bangalore	Space Electronic Equipments
8. Raman Research Institute, Bangalore	LCD
9. Telecommunication Research Centre, Delhi	VHF/Microwave Radio Relays PCM Multiplex
10. CEERI, Pilani	Microwave Tubes
11. Defence Research Development Laboratory, Hyderabad	Missile Ground Systems

With reference to the observation of C&AG, it may be relevant to state that the Laser Range Finders (LRF) designed by Instruments Research & Development Establishment (IRDF) Dehra Dun, has now been cleared for production and all the 100 Nos. have been targetted for supply during 1987-88. Similarly, in the case of IC Tubes, Army has placed an order for supply of 740 Nos. The delivery schedule as advised by the Army has been fixed as 290 Nos. in 1987-88 and 450 Nos. in 1988-89. During 1987-88 54 Nos. has been supplied till July, 1987. The production of IC Tubes is low due to reduced demand from the users.

Similarly, Space Electronics Division has been set up in BEL mainly to engineer and productionise equipment designed by Indian Space Research Organisation (ISRO). These products are characterised by low volume and high quality (Space Grade). Development and Engineering forms a major part of the Division's activities.

As such it would not be correct to view its working purely from profit/loss angle just like any other series production centres. It has, however, developed and productionised successfully products designed by ISRO. It has also plans for stepping up production of ISRO designed products in the future. With reference to LCD's certain types have been productionised but due to reasons such as market factor, scale of production etc., the production has so far not been viable. However, plans are being made to enlarge the types of products to cater to a wider market so that viability is achieved in the future.

Recommendation Serial No. 22 (Paragraph No. 3.53)

From the material furnished, the Committee have noticed that as against a revenue expenditure of around Rs. 80 crores incurred on R&D by the end of 1985, the value of the developed products has been of the order of Rs. 660 crores. Further, the cumulative position of the value of production of wholly/partially Company developed products to the total production in the case of Bangalore Unit was 49.72 per cent and for Ghaziabad Unit it was 75.20 per cent. Explaining the reasons for the percentage share of products being much more in Ghaziabad Unit than Bangalore Unit, the Company has informed that the Ghaziabad Unit was established in 1972 and most of the products taken up for production were of indigenous development whereas the Bangalore Unit was established in 1954 and development activities could start there only after the building up of a technological infrastructure in the Company. However, the production in Bangalore Unit has since picked up and the percentage of the value of production for the year 1984-85 only was 80.88 per cent. The Committee are of the view that R&D activity being vital for the healthy growth of Electronic Industry in India, a reasonably adequate amount must be spent for its proper development. However, the success of any R&D project does not depend alone on how much expenditure is incurred on it but the performance of specific tasks related to production and solution of practical problems posed by the Industry. The Committee, therefore, recommend that there should be close and constant interaction between the production and research wings of the industry so that the problems of crucial importance are tackled in an effective and conclusive manner. The Committee desire that the Company should intensify R&D activities to develop new products and to keep itself upto date with the latest available technology all the world over so as to build up its strength and confidence and minimise the foreign dependence of defence forces with regard to the supply of essential raw materials and components. For this purpose, the Company should also consider the

feasibility of conducting Seminar workshop and for arranging training programmes and orientation courses to educate its engineers with regard to the latest design technology, system engineering and management technology, etc.

Reply of the Government

The Company agrees with the Committee's observation that R&D activity being vital for the healthy growth of electronics industry in India, a reasonably adequate amount must be spent for its proper development. It may be stated that the Company has a policy to spend 5 to 8 per cent of its turnover on R&D activities. The actual expenditure on R&D activities for the last five years is as follows:

Rs. in million

R&D Investment	1981-82	1982-83	1983-84	1984-85	1985-86
Capital & Revenue	105.6	105.7	125.5	154.0	127.4
% of turnover	8.1	7.4	8.1	8.2	5.8

The Company also agrees to the Committee's recommendations that there should be close and constant inter-action between the production and research wings of the industry so that the problems of crucial importance are tackled in an affective and conclusive manner. It may be stated that the Company is in constant inter-action with the Defence Research & Development Organisation, National Laboratories and premier research institutions for development of new products and to keep itself upto-date with the latest available technology. The Company has noted the COPU's observations that it should build up its strength and confidence and minimise the foreign dependence of our Defence Forces.

With regard to minimising foreign dependence in the supply of essential raw materials and components, the Company fully agrees with the need for conducting seminars, workshops and for arranging training programmes and orientation course to educate its engineers with regard to the latest design technology, system engineering and management technology. It may be stated here that the Company attaches great importance to training of personnel and for this purpose it has set up a Centre which is fully equipped with computer facilities for continuing education and training of its work force as well as its engineers in various disciplines. All the engineers, young and old are all exposed to the training programmes through video courses which are obtained from professional bodies from abroad which go into various aspects of design technologies, system engineering, system technologies as also managerial

techniques. The R&D engineers attend seminars both National and International and present papers in such seminars and which are well received. The Company publishes a House Journal called 'BEL Engineer' for disseminating R&D achievements and developments to its engineers and other engineering fraternity. Training programmes are also conducted relating to product familiarisation for the benefit of customer engineers and Inspection authorities.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1)|87|D(BEL), dated 26-5-87.]

Recommendation (Serial No. 24 Paragraph No. 3.55)

According to the Company, its perspective plans are intimately related to the defence plans and due to the inherently changing nature of defence requirements 10 to 15 years perspective plans in the field of electronics equipments is beset with difficulties. The R&D plans of the Company would therefore, have to be lesser time frame. However, during evidence, Secretary of Defence Production informed the Committee that "now the mechanism is under consideration of the Government whereby 10 to 15 years perspective plan may be possible after a year or so as Users are coming up with their long term perspective plans." Keeping this in view, the Committee reiterate recommendation of the previous Committee (1971-72) that a perspective plan for research and development be drawn up for the next 10—15 years which should be reviewed every year in the light of performance and demand projections. In particular, concerted efforts should be made to achieve break through in know-how and manufacture of electronic components of vital importance so that self reliance is achieved in meeting of the Defence Supplies needs indigenously as far as possible, as also the requirements of electronics Industry as a whole.

Reply of the Government

The R&D perspective plan of BEL is intimately tied up with the long term perspective plans of Defence users. Once the Users long range 10—15 years plan is finalised, the Company will also formulate a 10—15 years R&D perspective plan.

The Committee's recommendations relating to efforts to be made to achieve breakthrough in know-how and manufacture of electronic components of vital importance to achieve self reliance in Defence needs in electronics field have been noted.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1)|87|D(BEL), dated 26-5-87.]

Comments of the Committee

(Please see paragraph 20 of Chapter I of the Report).

Recommendation (Serial No. 25 Paragraph No. 3.56)

The analysis of the Company's production profile shows that approximately 70 per cent of the BEL's production is for meeting the Defence needs and the remaining for civil requirements. Therefore, the Committee desire that the Company should prepare R&D Schemes covering both civilian and defence requirements. In doing so the Company should fully safeguard the interest of the Users and at the same time it should not try on uncertainties and obsolete technology at the cost of exchequer.

Reply of the Government

The Company has stated as follows:—

"The Company appreciate the Committee's desire that the Company should prepare R&D Scheme covering both Civilian and Defence requirements. The Company also accept the view that it should fully safeguard the interest of the Users and at the same time it should not waste time and effort on uncertainties and obsolete technology at the cost of exchequer".

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1)|87|D(BEL), dated 26-5-87.]

CHAPTER III

RECOMMENDATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF GOVERNMENT'S REPLIES Recommendation (Serial No. 11 Paragraph 2.51)

The Committee have also noticed that the cost of rework in the Equipment Division at Bangalore Unit from 1977-78 to 1983-84 worked out to Rs. 940.81 lakhs but the analysis of the reasons for rework has not been made by the Company. In the Component Divisions also, the major rework activity relate to inprocess rejections of TV Picture Tube including reclamation of parts from the defective TV guns. The extent of expenditure on rework has also not been assessed and reported to the higher Management. The Committee recommend that BEL should immediately analyse the reasons for the high cost rework involving about Rs. 940.81 lakhs in Equipment Division and also to assess the extent of the expenditure incurred on rework in the TV Picture Tubes. The outcome thereof should be reported to the Committee.

Reply of the Government

The Company had carried out a study on high cost of rework in equipments and the expenditure incurred on rework in the Television Picture Tubes. The production during the period from 1977-78 to 1983-84 in the Equipment Division is indicated below:—

(Rs. in lakhs)

Divisions	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	Total
LPE .	1193	1201	1452	911	1652	2218	2838	11465
HPE	835	883	1161	766	1590	2137	2622	9994
RADAR .	1712	2134	1643	927	1956	1370	1306	11048
					Grand Total			32507

The total production during the years 1977-78 to 1983-84 for the Equipment Division therefore, works out to Rs. 32507 lakhs. The re-work cost of Rs. 940.81 lakhs works out to a percentage of 2.89, with respect to the total production spread out over a period of

8 years. It may be reiterated that for a Company like BEL which has a wide range of product-mix, quantity running into large numbers, analysing of re-work in the Equipment Division is a shop floor activity, which is being done daily in the shop itself by the shop executives and the Departmental heads. The required corrective action is taken as part of the production system and detailed records of reasons for re-work are not maintained on a permanent basis, as it would be voluminous. However, rework hours and cost of re-work are consolidated on a monthly basis for monitoring of rejection level.

The extent of expenditure incurred on re-work in the TV Picture Tubes as assessed by the Company is indicated below:

Year	Production Value (in lakhs)	Cost of Re-work (Rs. in Lakhs)	% of re-work cost to Production Value
1977-78	294.50	38.88	13.20
1978-79	543.3	68.51	12.61
1979-80	685.2	86.42	12.61
1980-81	565.30	69.74	12.34
1981-82	726.20	99.48	13.70
1982-83	841.50	104.90	12.47
1983-84	831.10	105.95	12.66
		Total	
		573.88	

The percentage of re-work with respect to production has come down in the subsequent years as indicated below:

Year	Production Value (Rs. in lakhs)	Cost of re-work (Rs. in lakhs)	% of re-work cost to production Value
1984-85	1150.60	130.40	11.33
1985-86	2181.10	139.97	6.42

The Company has assured that the decreasing trend in the re-work cost as a percentage of production value achieved in 1985-86 is likely to be maintained in future also.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1)(87)D(BEL), dated 26-8-87.]

Recommendation Serial No. 20 (Paragraph Nos. 2.121 to 2.123)

According to the Corporate Objective of the Company, with its diversified products & technology base, BEL was expected to achieve a growth rate of 10 to 12 per cent per annum so as to strengthen necessary organisational structure to support the planned growth. In Committee's view, the planned growth rate of 10 per cent to 12 per cent is very slow as the cost escalation itself would contribute to an increase of about 7 to 8 per cent annually.

According to the Department of Defence Production and Supplies, the Company has already achieved a compounded growth rate of 16 per cent and is also planning for an average compounded growth rate of 28 per cent for the years 1985-90. However, from the information furnished to the Committee, it is seen that the growth rate in turnover achieved by BEL was only 17 per cent during the six years (1978-79 to 1983-84) as against 145 per cent achieved by KELTRON, another leading Electronic Company in Public Sector, during the same period.

Even though the comparison of growth rate of KELTRON with that of BEL may not be relevant as the product lines manufactured by them are different, but taking into account the gross block/ investments and other differences, the growth rate of 145 per cent in KELTRON is quite significant especially when it is catering to the needs of lakhs of consumers as against a few captive customers in the case of BEL. The only plausible reason for the stunted growth rate of BEL, according to the Committee, is that the BEL is neither made responsible to cater fully to the Defence needs of electronic equipments nor it is allowed to enter the consumer electronics in a big way. The Committee, therefore, recommend that the Government should lay down precise objectives for BEL in this regard and also to draw a plan to enable BEL to build up a position of strength.

Reply of the Government

Though the Company had planned in November 1979 to achieve a growth rate of 10 to 12 per cent per annum, it has achieved a

compounded growth rate of 16 per cent during the period of 1980-81 to 1984-85. The Company has also planned for an average compounded growth rate of 28 per cent during the Seventh Plan period i.e. 1985—90. As kindly accepted by the COPU, comparison of growth rate of M/s KELTRON with that of BEL may not be relevant as the product lines manufactured by them are different.

BEL is a Defence Public Sector Undertaking catering mainly to the strategic needs of Defence and other Government Departments for their professional electronic equipment and components requirements. It is submitted that BEL's objective in the field of consumer electronics can of necessity be only such (and circumscribed) as to serve this basic objective. BEL will therefore need to have a balance of product-mix between professional grade equipment/components and high technology/consumer electronic items in order to sustain the technological leadership and position of strength. KELTRON and other State Government undertakings and the Private Sector cater mostly to the requirements of consumer electronics as per the policy of the Government and may not be compared with BEL. The Department and the Company are taking necessary steps to ensure growth of the Company in the Seventh and Eighth Five Year Plan periods of a significantly higher order than heretofore.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1) |87|D(BEL), dated 26-5-87.]

Recommendation Serial No. 23 (Paragraph No. 3.54)

3.54 The Committee learnt that Government have established an R&D Organisation at Bangalore for the development of electronic and radars (LRDE). So far only two radar equipments have been developed by LRDE and these were entrusted to BEL for production as far back as in 1965-66 to 1973-74. Three more LRDE development products are at present under production in BEL. The Committee have also been informed by audit that 22 items developed by LRDE were entrusted for production to other Government and private agencies and 17 items were productionised in the plants of LRDE itself. The Committee are of the view that BEL which is the premier public sector production agency for radar and electronic equipments should get a greater share in the production of LRDE's developed products in respect of radar and electronics items. The Committee, therefore, recommend that the Government should formulate a specific policy in this regard.

Reply of the Government

The inter-action and liaison that exists between a design agency such as LRDE and production agency such as BEL is given in a procedure issued by Ministry of Defence (Deptt. of Defence Production & Supplies) for Design, Development, Production and Inspection of Electronic Equipment (DDPIL). The document defines the responsibility of various agencies involved in so far as it concerns design, development, production and inspection of electronic equipments. It provides for purposeful consultation and participation consistent with the defined responsibilities of the various agencies involved.

LRDE developed products have also been given for productionisation to other Public/State sector and private industries. The production units under the Ministry of Defence are organised to develop and establish strength in designated areas of technology for development, engineering and production of equipment/systems. For example, BEL has established strengths in development and production of Ground Radar Equipment and Communication Equipment. While appreciating the Committee's recommendation that BEL should get a greater share of LRDE's developed products, it is to be stressed that BEL is always and invariably associated during discussions before being nominated as the Production Agency where high technology, higher investment, high skills and longer gestation periods are involved. Presently, BEL is productionising several items of strategic Defence Radar and Communication Equipments developed by LRDE.

The Government has scrutinised the 22 items developed by LRDE and entrusted for production to other Government and Private agencies as stated by Audit. It is noted that except for 1 item for which M/s. ECIL Hyderabad was ultimately the production agency, the other items were not in the field of interest to BEL.

The Department is of the view that the existing system and guidelines adequately allow BEL taking up the production of LRDE developed products in respect of Radar and electronic items. BEL have always been getting productionisation assignments for R&D developed products having relevance to the product-mix of BEL.

Ministry of Defence, Department of Defence Production and Supplies O.M. No. 24(1)87(D)(BEL) dated 26.5.87.

CHAPTER IV

RECOMMENDATIONS IN RESPECT OF WHICH REPLIES OF GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE

Recommendation Serial No. 5 (Paragraph Nos. 2.12 to 2.13)

The Committee are unhappy to note the dismal production performance of BEL. Audit has reported shortfalls in the production targets fixed in the Low Power and High Power Equipment Divisions and Radar Division at Bangalore during 1977-78 to 1982-83. In 1980-81, the shortfall in production targets was as high as 51.2 per cent in Lower Power Equipment Division, 42 per cent in High Power Equipment Division and 47.4 per cent in Radar Division. However, in the subsequent two years i.e., in 1983-84 and 1984-85 actual production in the Low Power and High Power Equipment Divisions exceeded the fixed targets. It was only in Radar Division that the shortfall continued and it increased from 2 per cent in 1983-84 to 6 per cent in 1984-85. The production performance of Ghaziabad Unit has also been far from satisfactory upto 1980-81. The percentage of shortfall varied from 7 per cent in 1980-81 to as high as 38 per cent in 1977-78.

The Committee are also informed that BEL was to produce and despatch two Radars in 1984. Although, the Company completed all the work, their despatch was held up as one IC obtained from the collaborators misbehaved. The Company was not able to get over the problem and ultimately the entire batch of ICs was returned to the collaborators and a fresh batch was received from them after a year. In this connection, the representatives of the BEL, also admitted in evidence "it is laughable matter that we could not get over it. One IC which was obtained from our collaborator absolutely misbehaved and there no way to get over that." The Committee are surprised that in spite of technological advancement claimed by the Company it was completely helpless in rectifying an IC procured

from collaborators and it resulted in considerable delay in production and delivery of the vital equipment to the Armed Forces, etc. The Committee desire that the whole matter should be probed thoroughly with a view to fixing responsibility as to why the ICs were not properly tested in the Company when received from the collaborator and why the defect in the IC could not be got over by the Company itself and the consequent loss suffered by BEL on this account. The Committee also desire to be apprised of the extent of the collaborator's responsibility involved in this regard and what action has been taken by the Company to realise damages from the collaborator on this account.

Reply of the Government

The Department had taken up the matter with the Company. The shortfalls in achievements of 51.2 per cent and 47.4 per cent in Radar Division (all belonging to the Bangalore Complex) in 1980-81 was due to the 77 day strike by the workers. The short-falls in the production performance of the Ghaziabad Unit for the period 1977-78 to 1980-81 (as already reported) were due to (i) labour, unrest and power failures, (ii) unprecedented floods, continued agitation of labour culminating in lockout from 9th March, 1979, (iii) continued lockout till May, 1979 and abnormal conditions till July, 1979, power supply difficulties and technical problems relating to newly designed equipment. However, the percentage of shortfall came down steadily from 38 per cent in 1977-78 to 7 per cent in 1980-81 and the production exceeded the target during 1981-82.

On account of large capital investments involved it is considered neither desirable nor practical to establish facilities for total inspection of all the various types of components being purchased by the Company for manufacture of equipments, at the receipt stage. It is an accepted practice to accept quite a number of types of components on the basis of the manufacturer's certifications—either explicit or implicit. The integrated Circuits under consideration were accepted based on the manufacturer's certification. There are instances particularly with respect to Integrated circuits where even change of a manufacturer for the same type may result in problems in the actual equipment which would ordinarily be revealed only during

testing of the unit or the complete equipment. Integrated Circuits being sealed components and highly complex by their very nature of construction, the question of rectification does not arise and is not attempted. As the replacements received from the Collaborator were free of charge, there was no loss suffered by the Company on this account, though there was a delay in completion of the equipment.

The collaborator's|supplier's responsibility in this regard can only be to give replacement free of cost for the Integrated Circuits found defective. This has been accepted by the collaborator who arranged to give free replacements very quickly. The problem of malfunctioning of the particular Integrated Circuit in this equipment was referred to the collaborator on 18th February 1985 and after carrying out expeditious investigations they discovered that the items received by them from their own suppliers were not fulfilling the requirements and correct replacements were received in BEL on 15th March, 1986. The two Radars were finally despatched on 20th March, 1985.

[Ministry of Defence, Department of Defence Production and Supplies
OM No. 24(1)|87|D(BEL) dated 26.8.87.]

Comments of the Committee

(Please see paragraph 10 of Chapter I of the Report)

Recommendation Serial No. 17 (Paragraph No. 2.107)

The Committee also recommended that the Government should conduct a detailed study of supplies made by BEL to Defence and other Government Departments during the last 3 years with a view to finding out as to how much profits or losses the Company has incurred on each of these contracts and also to find out that the Company had not made any unreasonable high profits as monopoly supplier of equipments. The Committee may be apprised of the result of the study within six months of the date of presentation of their report.

Statement showing details of Motor Equipments Supplied by BEL to Defence and non-Defence customers during the years 1984-85 to 1986-87

Sl. No.	Eqpt.	Year	DEFENCE				NON-DEFENCE				Total Value D&N Rs. L	% Profit	Remarks				
			Qty. Supplied	Unit Price Average Rs.	Total Value Lakhs Rs.	Original delivery schedule	Date of actual supply	% of Profit	Unit Price Average Rs.	Total Value Lakhs Rs.				Original Delivery Schedule	Date of Actual Supply		
1.	AN/PRC-25	84-85	1960	22,242	435.94	3/84 to 3/87	5/84 to 3/85	1.6	204	35,284	71.98	9/84	7/84 to 12/84	31.1	507.92	5.8	Taking all supplies, i.e. to Def. as well as Non-Def. the margin is low.
		85-86	2230	22,360	498.63	3/85 to 3/87	3/86	-9.2	475	42,486	201.81	9/85 to 3/88	3/86	42.9	700.44	5.8	
		86-87	2530	23,562	596.13	3/85 to 3/87	12/86 to 3/87	-13.5	640	58,094	371.80	3/86 to 12/89	3/87	51.0	967.93	11.3	
2.	HS-412 Receiver	84-85	61	93,442	57.00	12/81 to 7/85	6/84 to 3/85	-1.5	36	1,40,353	50.61	3/85	3/85	25.0	107.61	11.0	The overall margin is not high.
		85-86	146	1,11,815	159.25	9/83 to 3/88	6/85 to 3/86	25.5	16	1,73,875	27.82	3/85 to 1/86	3/86	52.2	191.07	29.4	
		86-87	138	1,30,659	180.31	3/88	3/87	12.7	79	1,52,785	120.70	7/85 to 3/88	3/87	20.5	301.01	15.8	
3.	L1P-219 TWR	84-85	595	39,198	233.23	3/75 to 3/85	8/84 to 3/85	19.4	247	61,315	151.45	3/84 to 3/86	3/85	39.6	384.68	27.4	Realisations by export are much higher than Rs. 79,000 in 82-83. (Last yr. of export). The Indian Customers have been charged much less.
		85-86	699	44,097	308.24	3/83 to 3/87	6/85 to 3/86	25.6	338	66,837	225.91	3/84 to 4/87	7/85 to 3/86	44.9	534.15	33.7	
		86-87	752	51,039	383.81	3/87 to 3/88	7/86 to 3/87	32.1	426	70,472	300.21	3/84 to 3/89	12/86 to 3/87	48.5	684.02	239.3	
4.	LKW TX-MHS-125	84-85	10	4,64,900	46.49	7/81 to 3/85	12/84 to 3/85	34.7	3	6,29,333	18.88	3/82 to 3/83	12/84 to 1/85	43.4	65.37	37.2	
		85-86	17	4,04,000	68.68	5/81 to 3/84	3/86	15.2	7	7,96,285	55.74	3/83 to 2/85	3/86	51.8	125.42	31.6	
		86-87	32	5,50,218	176.07	12/85 to 8/88	7/86 to 3/87	39.6	6	1,720,500	43.23	3/85 to 3/87	6/85 to 3/87	51.8	219.30	42.0	

Note : Qty. supplied pertains to many indents placed by Army, Navy & Air Force. Profit percentage for 86-87 is provisional.

Margin on sales does not truly reflect profitability, particularly in low-volume high-tech. prod. lts. Return on capital employed is more appropriate criterion. The return on capital employed of BEL for the years 1984-85, 85-86, 86-87 was 20%, 17% and 15% respectively. These are much lower than the performance criteria laid down by Govt., which is in the range of 16 to 22%.

Recommendation Serial No. 18 (Paragraph No. 2.106)

The Committee do agree that keeping in view the different classes of customers or the products to be sold it may not be possible to lay down any uniform method on the basis of which the BEL could be asked to determine the price of its products. The Committee are, however, not convinced of the arguments advanced by the Company and also by the Government that 'since Company is following in general the guidelines of the Government there is no need to lay down any detailed price policy'. The Committee feel that as per objectives of the Company a sound and rational pricing policy has to be formulated for its products so as to ensure that the customers get quality products of international standard at reasonable price. The Committee, therefore, recommend that the Government should consider the feasibility of determining the pricing policy for its products which may take into account different selling conditions such as competitive selling, partial or total monopoly selling, selling only to Government Departments in the public interest, etc.

Reply of the Government

Pricing norms to be adopted by Public Sector enterprises are covered in the guidelines issued by Bureau of Public Enterprises vide O.M. No. BPE/46/Adv(F)/68/25 dated 27th December 1968 and BPE No. 1(76)/Adv/Fin/70 dated 18th June 1970. The objectives of these guidelines as stated by Bureau of Public Enterprises were that public enterprises shall be economically viable units and all out efforts should be made to increase their efficiency and establish their profitability at the earliest. The guidelines cover (a) enterprises which produce goods and services in competition with other domestic producers and (b) enterprises which operate under monopolistic or semi-monopolistic conditions.

Based on the recommendation of COPU in its 40th Report (5th Lok Sabha) price disputes between Public Sector Undertakings *inter se* as well as between Government Department and Public Sector Undertakings should be settled within a time schedule to be prescribed in this behalf vide O.M. No. BPE/15/(1)/Adv(F)/75 dated 3rd May 1975, Ministries and Public Sector Undertakings have *inter-alia* been advised by Bureau of Public Enterprises to note the COPU's above

recommendation and take all steps necessary to finalise pending cases expeditiously either by referring them to the Pricing Committee or through direct negotiations. The pricing policy of BEL is based on the above three Bureau of Public Enterprises Office Memoranda.

[Ministry of Defence, Department of Defence Production and Supplies
O.M. No. 24(1)|87|D(BEL) dated 26.5.87]

Comments of the Committee

(Please see Paragraph 17 of Chapter I of the Report)

CHAPTER V

RECOMMENDATIONS IN RESPECT OF WHICH FINAL REPLIES OF GOVERNMENT ARE STILL AWAITED

(Recommendation Serial No. 15 (Paragraph 2.84))

During oral evidence of Department of Defence Production and Supplies, the Committee pointed out to them that when the Committee desired to know from the Company with regard to the standards of scientific method evolved by them to ascertain consumption of gold in production process, they could not satisfy the Committee. The Defence Production Secretary then stated that "I entirely agree with you that we should be satisfied that reasonable care is being taken to see that there is no unnecessary wastage, pilferage etc." He also added, "I suggest for consideration of the Committee that I can direct them to prepare a stock position every month or whatever time is convenient to know whether the process followed is within the improved norms or not. If no norms have been prescribed whether they need be prescribed and they should be prescribed within the fixed time." The Committee recommend that the Government should issue immediate instructions to the Company to prepare and submit to the Board/Ministry a reconciliation statement of input of precious metals used for production with the output at periodical intervals. While issuing instructions the procedure being followed in similar enterprises in India or abroad or by the appointment of Consultants may also be taken into account, if considered necessary.

Reply of the Government

On the advice of the Department, the Company has selected the Indian Institute of Science (IISc.) to suggest a proper procedure for reconciling the input and the output of the precious metals used in the process. The IISc. is likely to commence the work shortly and

have indicated a time-schedule of 4 months to complete the work. Based on the recommendations of this expert body, Government will issue instructions laying down the procedure to be followed for the reconciliation of input and output of precious metals.

[Ministry of Defence, Department of Defence Production & Supplies O.M. No. 24(1)/87/D(BEL) dated 26-8-1987]

NEW DELHI;
October 27, 1987
Kartika 5, 1989 (S)

VAKKOM PURUSHOTHAMAN,
Chairman,
Committee on Public Undertakings.

APPENDIX I

Minutes of the 4th Sitting of the Committee on Public Undertakings
held on 7-10-1987

.....

The Committee sat from 16.00 hrs. to 16.30 hrs.

PRESENT

Shri Vakkom Purushothaman—*Chairman*

MEMBERS

2. Shri Dinesh Goswami
3. Shrimati Prabhawati Gupta
4. Prof P. J. Kurien
5. Shri K. H. Ranganath
6. Shri Harish Rawat
7. Shri A. C. Shanmugam
8. Shri Lal Vijay Pratap Singh
9. Prof. Saif-ud-din Soz
10. Shri Zainul Basher
11. Shri Jagesh Desai
12. Shri Krishna Nand Joshi
13. Shri Ram Naresh Kushawaha
14. Shri Chimanbhai Mehta
15. Shri Shanker Sinh Vaghela

SECRETARIAT

1. Shri R. D. Sharma—*Chief Financial Committee Officer*
2. Shri Rup Chand—*Senior Financial Committee Officer*

OFFICE OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA

1. Shri C. P. Mittal—*Chairman, Audit Board*
2. Shri D. N. Anand — *Secretary, Audit Board*

The Committee considered and adopted the Action Taken Report on 13th Report of Committee on Public Undertakings (1986-87) on Bharat Electronics Ltd.—Capacity Utilisation, Production & Pricing, Research and Development, as approved by the Action Taken Sub-Committee.

The Committee authorised the Chairman to finalise the Report on the basis of factual verification by Ministry of Defence (Department of Defence Production & Supplies)/Bharat Electronics Limited and Audit and to present the same to Parliament in the next session.

The Committee then adjourned.

APPENDIX II

(*Vide* para 3 of Introduction)

Analysis of action taken by Government on the recommendations contained in the 13th Report of the Committee on Public Undertakings

(*Eighth Lok Sabha*)

I. Total number of recommendations made	25
II. Recommendations that have been accepted by the Government (<i>Vide</i> recommendations at Sl. Nos. 1-4, 6-10, 12-14, 16, 19, 21, 22, 24, and 25).	18
Percentage to total	72%
III. Recommendations which the Committee do not desire to pursue in view of Government's replies (<i>Vide</i> recommendations at Sl. Nos. 11, 20 and 23).	3
Percentage to total	12%
IV. Recommendations in respect of which replies of Government have not been accepted by the Committee (<i>Vide</i> recommendation at Sl. Nos. 5, 17 and 18)	3
Percentage to total	12%
V. Recommendation in respect of which final reply of Government is still awaited (<i>Vide</i> recommendation at Sl. No. 15)	1
Percentage to total	4%