

**COMMITTEE ON PUBLIC
UNDERTAKINGS
(1981-82)**

(SEVENTH LOK SABHA)

THIRTY-NINTH REPORT

**Action Taken by Government on the recommendations contained
in the Fiftieth Report of the Committee on
Public Undertakings (Sixth Lok Sabha)**

on

**BHARAT HEAVY ELECTRICALS LIMITED
(MINISTRY OF INDUSTRY—DEPARTMENT OF
HEAVY INDUSTRY)**

Presented to Lok Sabha and

Laid in Rajya Sabha on....



**LOK SABHA SECRETARIAT
NEW DELHI**

April, 1982/Chaitra, 1904 (S)

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COMMITTEE ON PUBLIC UNDERTAKINGS
(SEVENTH LOK SABHA)

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(1981-82)**

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(1981-82)

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8. *Shri Lal K. Advani
9. *Shri Shrikant Verma

* Ceased to be a Member consequent on his retirement from Rajya Sabha on 2 April, 1982.

INTRODUCTION

I, the Chairman, Committee on Public Undertakings having been authorised by the Committee to submit the Report on their behalf, present this 39th Report on Action Taken by Government on the recommendations contained in the 50th Report of the Committee on Public Undertakings (Sixth Lok Sabha) on Bharat Heavy Electricals Ltd.

2. The 50th Report of the Committee on Public Undertakings was presented to Lok Sabha on 27 April, 1979. Replies of Government to all the recommendations contained in the Report were received on 9 March, 1982. The replies of Government were considered by the Action Taken Sub-Committee of the Committee on Public Undertakings on 1 April, 1982. The Report was finally adopted by the Committee on Public Undertakings on 5 April, 1982.

3. An analysis of the Action Taken by Government on the recommendations contained in the 50th Report (1978-79) of the Committee is given in Appendix II.

NEW DELHI;
April 7, 1982

Chaitra 17, 1904 (Saka).

BANSI LAL,
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 Fiftieth Report (Sixth Lok Sabha) of the Committee on Public Undertakings on Bharat Heavy Electricals Ltd. which was presented to Lok Sabha on 27 April, 1979.

2. Action Taken notes have been received from Government in respect of all the 7 recommendations contained in the Report. These have been categorised as follows:—

- (i) *Recommendations/Observations that have been accepted by Government:*

Serial Nos. 1 to 6.

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

NIL

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

NIL

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

Serial No. 7.

The Committee will now deal with the action taken by Government on Recommendation No. 7.

Turnkey contract for construction of a power station in Tripoli West, Libya.

Recommendation (Serial No. 7)

3. In para 157 of the 50th Report (6th Lok Sabha), the Committee observed as follows:—

“A typical case of lack of care or worse which would cost BHEL heavily far from yielding any profit is that of a power station construction undertaken on turnkey basis in Libya. The contract was for a lump-sum but BHEL had given a sub-contract for civil works to Gammon India on an item rate basis. The tender amount for the civil work was Rs. 17 crores which now has turned out to be actually

Rs. 40 crores. This was due to gross under-estimation of the earth work and structural steel requirements. The earth work for cooling water system which was estimated to be 25,000 cubic metres went up to 1.25 lakhs cubic metres, i.e. five times. The quantity of structural steel went up from 424 tonnes to about 2400 tonnes i.e. about six times. That the incredible increase in earth work arose out of misinterpretation of a clause in the tender schedule by the BHEL is indeed deplorable. What was worse was that no survey of the site had been carried out before tendering for the work nor has the BHEL been clear about the size of the various structures to be built by them. As this utter bungling resulted in an extra payment of the order of Rs. 23 crores and on the whole the turnkey project would end up in a loss to the BHEL, the Committee require that the results of the inquiry promised to be made by the Chairman, BHEL before the Committee and the action taken on the basis thereof should be intimated to them within three months."

4. The 50th Report was presented by the Committee in April, 1979. The replies of the Ministry of Industry (Department of Heavy Industry) were required to be submitted to the Committee within six months (October 1979), but the Committee had required that the results of the enquiry referred to in para 157 and the action taken on the basis thereof should be intimated to them within three months. However, no reply was received even by October, 1979. Initially extension of time for submission of the replies was sought upto December, 1979 in the Department of Heavy Industry O.M. dated 30 November, 1979. Thereafter further extensions were sought at various intervals upto March, 1981 *vide* Department's letters dated 2-2-1980, 27-2-1980, 16-6-1980, 27-8-1980 and 17-12-1980. However, replies were not still forthcoming despite reminders. It was only after the matter was raised by the Committee at a sitting held on 12-2-1982 the replies were received in March, 1982.

5. An Inquiry Committee was constituted by the Chairman, BHEL in March 1979. The Inquiry Committee, which was expected to submit its report in a month, submitted its report in August, 1979. A copy of the report has been received from the Department of Heavy Industry in March, 1982. The terms of reference of the Industry Committee were as follows:—

1. To examine the basis on which the civil works were estimated at the time of making the overall offer to the Electricity Corporation of Tripoli with reference to—
 - (a) the technical data furnished in the tender documents;

- (b) the data collected by the team of BHEL engineers; and
- (c) the time available for submission of tender.

2. To examine the adequacy of the technical and market data that were assumed for proper estimation and checks if any that were exercised with the data available for comparable projects in India.
3. To examine the circumstances in which large variations in quantities of civil works that have eventually occurred during execution.
4. To suggest remedial measures for avoiding such large variations in Estimation of civil works in turnkey contracts in future and suitable guidelines for conclusion of such contracts for civil works to adequately safeguard the interest of BHEL.

6. The conclusions of the Inquiry Committee are reproduced in Appendix I.

7. In reply to the conclusions/recommendation of the Committee on Public Undertakings contained in para 157 of the 50th Report, the Department of Heavy Industry stated that "BHEL has since forwarded to government a copy of the report of the Committee known as Sambamoorthi Committee. There are a few substantive issues which need to be clarified before government take a final view in the matter. These are being examined in consultation with the management of BHEL".

8. Although the Committee understand the delay in intimating the action taken on the conclusions/recommendations relating to the BHEL's proposed long-term agreement for wider collaboration with M/s. Siemens of West Germany, they are unable to understand how conclusive action could not be taken on the recommendation relating to the turnkey contract for construction of a power station in Tripoli West, Libya, even after nearly three years. This inordinate delay despite the Committee's desire to be intimated of the action taken within three months in this case is, to say the least, regrettable.

9. The Committee had pointed out that though the contract was for a lumpsum, BHEL had given a sub-contract for civil works to Gammon Indja on an item rate basis without carrying out any survey of the site before tendering for the work and without being clear about the size of the various structures to be built by them. Further, the incredible increase in the earth work (5 times) which resulted in huge extra payment to the sub-contractor arose out of

a misinterpretation of a clause in the tender schedule by the BHEL. Thus, it required an enquiry to ascertain, inter alia, whether it was wise to have entered into a lumpsum contract without assessing the nature and the quantum of work to be executed and to have entrusted the civil works to a sub-contractor on item rate basis and who was responsible for this and for the misinterpretation of the relevant clause in the tender schedule. However, the terms of reference of the Inquiry Committee do not cover these basic issues. Though the Inquiry Committee was constituted before the presentation of the 50th Report, it was expected of the undertaking and the administrative Department to see that the terms of reference were suitably modified in the light of the observations contained in paragraph 157 of the Report. This unfortunately was not done. The Committee are, therefore, constrained to urge that fresh enquiry should be instituted in order to clarify the basic issues and if possible, to fix responsibility for the lapses. The Committee would await the outcome. They would also like to get a detailed explanation of the delay in considering the Sambamoorthi Committee report which has been submitted as early as August, 1979 and in initiating action in the direction desired in the 50th Report presented in April, 1979.

CHAPTER II

RECOMMENDATIONS THAT HAVE BEEN ACCEPTED BY GOVERNMENT

Recommendation (S. No. 1, Paragraph 48)

There has been a public debate on the proposed broad based long term collaboration agreement between BHEL and Siemens of West Germany—a multi-national company represented in 450 cities in 120 countries. The matter had also figured in the discussions in both Houses of Parliament. A Systems Collaboration of the kind proposed covering as it does a wide area and time span, is admittedly without a parallel. Further according to the existing guidelines issued by Government on the basis of earlier recommendations of the Committee, period of collaboration where necessary has to be less than 5 years rather than more and that even in the case of existing collaborations any extension beyond a period of eight years has to be brought to the notice of Parliament. For these reasons the Committee's examination of this proposal was required and valid.

Recommendation (S. No. 2, Paragraph 49)

BHEL has by now a long experience in the field of power equipment industry. They had already entered into a number of collaboration agreements, which are currently 23. Of these, 4 are with Siemens of West Germany and their fully owned subsidiary KWU. The Committee have been informed by responsible persons who appeared before them that on the top of all this the proposal for entering into a broad based long term collaboration with Siemens would be detrimental to the research and development activities and would run counter to the declared objective of the first Corporate Plan (1974) of the BHEL of reducing dependence on foreign technology. It has also been stated that indiscriminate collaboration covering such a wide range was not justified as it was not all need-based. Admittedly, Siemens are not the best in many products covered by the technical scope of the proposed collaboration.

Recommendation (S. No. 3, Paragraph 50)

The Committee find that no inquiries were made from other leading power equipment manufacturers in the world and that the

proposal was negotiated with Siemens only. Ironically, the existing collaboration with this multinational and its subsidiary has been put forward as a justification for broad-basing it. It has been argued that certain gaps in knowledge could not be bridged within an acceptable time frame. The Committee received an impression that the existence of a number of collaborations has perhaps affected their urge to become wholly self-reliant. The remedy proposed will therefore be worse than the disease.

Recommendation (S. No. 4, Paragraph 51)

Though the draft agreement says that the arrangement will be for the mutual advantage of BHEL and Siemens it appears that Siemens will be a far greater gainer. In fact this has been neatly put by BHEL itself as brought out in Paragraph 38 of this Report. This is perhaps the reason why all kinds of indirect coercion to perpetuate the tie-up has been sought to be brought into the agreement. The agreement will be for a period of 15 years subject to an extension by another 10 years. However, if a decision is not taken to extend it by the 12th year information flow to BHEL on new developments will cease. A prolonged tie-up of this kind with a multi-national having local subsidiaries is bound to result in consolidation of the subsidiaries and transfer of economic surplus from a country in a cheap labour situation like India not to speak of exploitation of natural resources.

Recommendation (S. No. 5, Paragraphs 142 to 144)

The unusual features of the proposed collaboration with Siemens as emerging out of the draft agreement drawn up first is summed up below.

The transfer of technology will be mainly through documentation consisting of 7,50,000 pages and training of BHEL personnel upto 1800 man months. Additional documentation or training that may be required was to be paid for extra subject to an escalation, the formula of which was not specified. Clarification relating to the interpretation of the documentation supplied by Siemens could be obtained only to the extent they and they only considered it reasonable. There was also restriction on discussions on adaptation of technology by the officers under training with Siemens, who will have no responsibility whatsoever in regard to the results obtained as a result of this collaboration which would depend entirely on the ability of the BHEL. In fact surprisingly there is no penalty clause in the draft agreement.

Whereas BHEL will pay for the knowhow of Siemens, Siemens will have access to the BHEL know-how free of charge. This is fantastic. If BHEL entered into a collaboration with a third party such agreement will have to take into account the objectives and interests of Siemens which obviously would include their subsidiaries in India. A clever attempt to avoid competition between BHEL and Siemens subsidiaries in India is thus evident. BHEL would not be in a position to sub-license their rights obtained without making further payment to Siemens. This free horizontal transfer of technology in India was not possible. It looked as if BHEL was under obligation to mark the contract products as in technical collaboration with Siemens thereby giving publicity to the collaborator at our cost. The export rights of the BHEL would be restricted. This is not all. BHEL would be informing Siemens the details of all quotations that it might give for exports thereby compromising on secrecy. In the case of disputes the arbitration would be in accordance with the rules of Indo-German Chamber of Commerce who would have a large say in the matter of appointment of arbitration.

The terms of the draft agreement have violated the guidelines issued by Government in regard to not only the period of agreement but also the guarantee, arbitration and penalty clauses in particular. To justify this violation on the basis of the proposal being unique is not quite acceptable. This was all the more reason why the proposal warranted a close scrutiny not only by Government but also by a Parliamentary Committee. Since the Committee took up the examination of the proposal some changes have been made in the draft agreement on further negotiations with Siemens. However, as has been clearly brought out in this Section of the Report the unusual features heavily weighted in favour of Siemens largely remain intact.

**Reply of the Government to recommendations at S. Nos. 1 to 5
(Paragraphs 48 to 51 and 142 to 144)**

The proposal has not been agreed to by the Government and has lapsed. Further information in this regard is given in para (1) and (2) of the Government reply to S. No. 6 (Para 145) of Committee's recommendation.

[Ministry of Industry (Department of Heavy Industry)
D. O. No. 23(5)/78-HEM dated March, 9, 1982]

Recommendation (S. No. 6, Paragraph 145)

In view of the foregoing the Committee wish to emphasise that there is an urgent need for sincere efforts on the part of the BHEL

to become self-reliant as speedily as possible. In this context the R&D expenditure would require to be stepped up in a big way so as to be in line with large power equipment manufacturers in the world. In the meantime should it be considered absolutely necessary to go in for any further collaboration a global enquiry should be sent out and a High Powered Technical Body unconnected with the proposed broad-based collaboration with Siemens should be constituted to dispassionately go into the actual and immediate need of such collaboration the minimum area in which it should be obtained and the scope, whether it should be for the Systems or Products. The endeavour should be to get the best possible terms for such a collaboration and there should be no tie-up with one particular organisation and that too for a long time.

Reply of the Government

The two aspects raised in the Report which were referred to at the recent hearing of the Committee pertaining to the broad-based agreement between BHEL and Siemens and the losses incurred by BHEL in the Libyan contract (Tripoli West Power Station) have been examined and the position is indicated below:

The broad-based agreement which was proposed by BHEL for collaboration with Siemens in 1976-77 was considered by Government at length and it was finally decided not to approve of the same. BHEL was advised to take stock of its requirements for technological tie-ups and to come up with specific proposals for collaboration only in those areas/products where technological and commercial needs of the Company so warranted. In accordance with the Govt. thinking, BHEL submitted four proposals for technical collaboration with M/s. Siemens and M/s. KWU (a fully owned subsidiary of M/s. Siemens). These were duly considered and approved by Government. These covered the following items:

1. Surface condensers.
2. SF 6 and vacuum circuit breakers.
3. AC/DC Motors.
4. Turbo-generators upto 200 MW capacity.

Government are fully in agreement with the spirit of the Committee's recommendation that BHEL should become self reliant as speedily as possible. We would, however, wish to submit that this process was initiated by BHEL long ago and has already been implemented to a large extent. In fact, the various collaborations which BHEL entered into with foreign companies are aimed at

acquiring self-sufficiency in its operations and also to make its equipment and know-how competitive in the world market.

It may also be submitted that since the technologies the world over keep on improving and advancing, the possibility of BHEL entering into further collaborations with reputed foreign companies cannot be ruled out.

As regards the recommendations for stepping up R&D expenditure, Government are in full agreement with the Committee's recommendations. There is need for stepping up indigenous research and development effort. In spite of our financial constraints a provision for Rs. 31.5 crores has been made for the establishment of additional R&D facilities in BHEL. The expenditure on research and development in the last 5 years has been of the following order:

Year	Rs. in lakhs
1976-77	445
1977-78	507
1978-79	587
1979-80	986
1980-81	1184

While we are stepping up our expenditure on R&D facilities, we would like to submit that the maximum effort that we can put in is far less as compared to the R&D expenditure of some of the leading manufacturers of power generation equipment abroad. Some of them spend as much as 10 per cent of their annual turnover on research and development and this level, viewed against their total gross turnover, works out to almost 50 to 100 times of our total effort. In fact, in the case of one foreign company, the expenditure on research and development alone is more than the total annual turnover of BHEL.

However, with limited resources at its disposal, BHEL had been making serious efforts for indigenous research and development. The Welding Research Institute at Tiruchy and Ultra High Voltage Battery Laboratory being set up at Bhopal are examples of BHEL's earnestness in this behalf. The centralised Research and Development Division at Vikasnagar, Hyderabad, with a total investment of Rs. 17.45 crores is nearing completion and is likely to be fully operational in the next few months.

[Ministry of Industry (Department of Heavy Industry)
D. O. No. 23(5)/78-HEM dated March, 9, 1982]

CHAPTER III

**RECOMMENDATIONS WHICH THE COMMITTEE DO NOT
DESIRE TO PURSUE IN VIEW OF GOVERNMENT'S REPLIES.**

-NIL

CHAPTER IV

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

-NIL-

CHAPTER V

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

Recommendation (S. No. 7, Paragraph 157)

A typical case of lack of care or worse which would cost BHEL heavily far from yielding any profit is that of a power station construction undertaken on turnkey basis in Libya. The contract was for a lump-sum but BHEL had given a sub-contract for civil works to Gammon India on an item rate basis. The tender amount for the civil work was Rs. 17 crores which now has turned out to be actually Rs. 40 crores. This was due to gross under-estimation of the earth work and steel requirements. The earth work for cooling water system which was estimated to be 25,000 cubic metres went up to 1.25 lakhs cubic metres, i.e., five times. The quantity of structural steel went up from 424 tonnes to about 2400 tonnes, i.e., about six times. That the incredible increase in earth work arose out of a misinterpretation of a clause in the tender schedule by the BHEL is indeed deplorable. What was worse was that no survey of the site had been carried out before tendering for the work nor has the BHEL been clear about the size of the various structures to be built by them. As this utter bungling resulted in an extra payment of the order of Rs. 23 crores and on the whole the turnkey project would end up in a loss to the BHEL, the Committee require that the results of the inquiry promised to be made by the Chairman, BHEL before the Committee and the action taken on the basis thereof should be intimated to them within three months.

Reply of the Government

With regard to para 157 of the Report of the Committee, the Government would like to state that BHEL has since forwarded to Government a copy of the report of the Committee known as Sambhamoorthy Committee. There are a few substantive issues which need to be clarified before Government take a final view in the matter. These are being examined in consultation with the management of BHEL.

[Ministry of Industry (Department of Heavy Industry)

D. O. No. 23(5)/78-HEM dated March. 9. 1982]

Comments of the Committee

(Please see paragraphs 8 and 9 of Chapter I of the Report.)

NEW DELHI;
April 7, 1982

Chaitra 17, 1904 (Saka).

BANSI LAL,
Chairman,
Committee on Public Undertakings.

APPENDIX I

[Vide paragraph 6 of the Chapter I]

Conclusions of the Enquiry Committee

1. Inadequacy of time for a detailed pre-tender preparation for a project of this magnitude and complexity has been the major contributing factor towards the cost overrun. Had more time been available a better assessment of the job with preparation of detailed layouts could have been made thus avoiding much of the excess that has taken place whether due to the under-estimation by the civil department or due to subsequent plant layout changes. The Committee are satisfied that in this limited available time what best can be done, has been attempted by BHEL for this tender after a conscious decision to tender for this project was taken by the Management.

2. For a major project with civil works of complex nature which BHEL was undertaking as a first venture without previous experience of overseas contracts, assuming turnkey responsibilities, the 3 years time schedule for the completion of the project is a very tight one. This time schedule has not been achieved even in India in comparable projects and to achieve this in a foreign country with inherent problems of logistics, particularly that obtaining in Libya, as brought out in chapter 3, is a very difficult task. Having taken up this job BHEL are doing very good work indeed in spite of the above constraints to come to the present stage of progress. On the civil works side this could be achieved mainly because of the wisdom in selecting a capable contractor with overseas experience in M/s. Gammon India. Had this work been entrusted to any other contractor of lesser standing, with the inherent problems of logistics in Libya, the project would not have progressed to anywhere near the present stage and would have landed BHEL in difficulties and in loss not only financial but also in image in the international market. In retrospect, when one takes an overall view of the project at this stage the higher rates agreed to with M/s. Gammon India Limited, to secure their services for this Project, appear amply justified.

3. As far as the scope of works which was clear at the time of tendering, the Civil Department, again due to lack of time could not prepare sufficient number of drawings to estimate the quantities more accurately. The assumptions made with regard to the loading

details of bought out equipment which amounted to nearly 50 per cent of the total equipment, have also not been fully realised in the execution. Both these causes contributed in the under-estimation of the civil works leading to an excess of Rs. 8.49 crores which is about 50 per cent over the original estimate of civil works of Rs. 17.025 crores. This excess of 50 per cent in civil works estimate is the compounded effect of increased quantities and the higher rates agreed to with M/s. Gammon for the execution. The actual under-estimation in quantities works out between 25 to 30 per cent of the original quantities and this cannot be said to be abnormal under the circumstances under which the tender estimates were prepared.

4. The excess that has resulted on account of incorrect tender specification amounting to Rs. 1.035 crores is beyond the control of BHEL again due to time constraint mentioned above on account of which first hand site survey could not be carried out by BHEL, prior to tendering and which they could do only after the award of the contract and taking over the site.

5. Partly due to the time constraints by which BHEL were not in a position to prepare detailed layout plans and other details sufficient to give a clear picture of the scope of civil works and partly due to the insistence of the customer's consultant for a more elaborate layout in tune with modern power station practice abroad, the scope of civil works expanded due to the subsequent plant layout changes resulting in an excess of Rs. 6.9 crores. Being a lumpsum turnkey project and with a need to create a good image international market and to develop good relations with the customer, BHEL had to accede to the consultant's insistence.

APPENDIX II

(Vide Para 3 of Introduction)

Analysis of action taken by Government on the recommendations contained in the Fiftieth Report of the Committee on Public Undertakings (Sixth Lok Sabha).

I.	Total number of recommendations made	7
II.	Recommendations that have been accepted by the Government (Vide recommendations at S. No. 1, 2, 3, 4, 5 and 6).	6
	Percentage to total	85.7
III.	Recommendations which the Committee do not desire to pursue in view of Government's reply	NIL
	Percentage to total	NIL
IV.	Recommendations in respect of which replies of Government have not been accepted by the Committee	NIL
	Percentage to total	NIL
V.	Recommendations in respect of which final replies of Government are still awaited (Vide recommendation at S.No. 7).	1
	Percentage to total	14.3%